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THE SURGICAL TREATMENT OF ESSENTIAL HYPERTENSION

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The study of results obtained from extensive thoracolumbar sympathectomies performed on patients with hypertensive disease is important. Only a few noteworthy series have been reported.[1] They include a sufficient number of cases, however, to indicate without much question that surgical intervention in the treatment of hypertension is worth while in well selected patients.

That hypertension is a disease that must remain primarily the problem of the internist is not questioned by the surgeons interested in the surgical aspect of the treatment. It is important, however, to emphasize that neurosurgeons Peet [10] and Adson [2] were instrumental in stimulating wide interest in the study of hypertension by attacking the sympathetic nervous system in a sufficient number of patients to establish the fact that in a few patients a definite and prolonged drop in blood pressure could be expected, as well as relief of disabling subjective symptoms in a still greater number.

The results obtained in 100 consecutive cases by extensive thoracolumbar sympathectomy performed one and a half to four years ago by the same surgeon (J. L. P.) were selected for study. More than 300 patients have been subjected to surgical intervention for the treatment of hypertensive disease by the same surgeon. The early experiences have been previously reported,[3] and the others are too recent to permit definite conclusions to be drawn from their study.

The surgical attack on the sympathetic nervous system in the treatment of hypertension was suggested in 1923 by Daniélopolu,[4] and Brüning [5] in the same year made similar proposals. Pende [6] in 1924 suggested resection of the left splanchnic nerve for hypertension. Pieri [7] in 1927 performed a unilateral splanchnicectomy for intestinal atony. In 1930, at the suggestion of Pende, he resected the left splanchnic nerves by a supradiaphragmatic approach in 2 patients who had arterial hypertension. Pereira [8] objected to the supradiaphragmatic approach because of the danger of entering the pleura and suggested in its stead resection of the splanchnic nerve below the diaphragm. Craig [9] in 1932 performed a subdiaphragmatic resection of the greater and the lesser splanchnic nerves and section of the sympathetic trunk between the twelfth thoracic and the first lumbar ganglion. On April 1, 1933, by the removal of a 4 cm. section of the eleventh rib, Craig resected the major and lesser splanchnic nerves. The pleura was inadvertently opened during the surgical procedure, so he discarded this technic. Peet [10] first performed his bilateral one stage supradiaphragmatic resection in November 1933. His technic, which has changed little since that time, consists of resection of a 4 cm. segment of the eleventh rib and a supradiaphragmatic resection of segments of the greater and lesser splanchnic nerves as well as the sympathetic chain from the ninth or tenth through the twelfth thoracic ganglion. In 1935 Adson [11] carried out a two stage bilateral subdiaphragmatic resection of all the splanchnic nerves at the point at which they penetrated the diaphragm, with resection of the first and second lumbar ganglions. Through this approach exploration and biopsy of the suprarenal glands and kidneys are possible. Crile [12] began celiac ganglionectomies for hypertension in 1936. In the fall of 1938 Smithwick,[1b] after experience with some of the aforementioned procedures, combined the Adson and Peet technics and removed longer segments of the sympathetic chain extending from the tenth thoracic through the second lumbar ganglion, including the splanchnic nerves

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1. (a) Peet, M. M.; Woods, W. W., and Braden, S.: The Surgical Treatment for Hypertension: Results in Three Hundred and Fifty Consecutive Cases Treated by Bilateral Supradiaphragmatic Splanchnicectomy and Lower Dorsal Sympathetic Ganglionectomy, J. A. M. A. **110**:1877-1878 (Nov. 30) 1940. (b) Smithwick, R. H.: A Technique for Splanchnic Resection in Hypertension, Surgery **7**:1-8 (Jan.) 1940. (c) Grimson, K. S.: Total Thoracic and Partial to Total Lumbar Sympathectomy and Celiac Ganglionectomy in Treatment of Hypertension, Ann. Surg. **114**:753-775 (Oct.) 1941. (d) de Takats, G.; Heyer, H. E., and Keeton, R. W.: The Surgical Approach to Hypertension, J. A. M. A. **116**:501-507 (Feb. 14) 1942. (e) de Takats, G.; Grauspuse, G. W.; Fowler, E. F., and Jenzik, R. J.: Surgical Approach to Hypertension: Second Report, Arch. Surg. **52**:111-163 (Aug.) 1946.

2. Adson, A. W., and Brown, G. E.: Malignant Hypertension: Report of Case Treated by Bilateral Section of Anterior Spinal Nerve Roots from the Sixth Thoracic to Second Lumbar, Inclusive, J. A. M. A. **102**:1115-1118 (April 7) 1934. Rowntree, L. G., and Adson, A. W.: Bilateral Lumbar Sympathetic Neurectomy in the Treatment of Malignant Hypertension, ibid. **85**:959-961 (Sept. 26) 1925.

3. Bartels, E. C.; Poppen, J. L., and Richards, R. L.: Surgical Treatment of Hypertension: Results in Fifty-Four Cases, Ann. Int. Med. **17**:

4. Daniélopolu, D., cited by Pereira.[8]

5. Brüning, F.: Die operative Behandlung der Angina Pectoris durch Exstirpation des Hals-Brustsympathicus und Bemerkungen über die operative Behandlung der abnormen Blutdrucksteigerung, Klin. Wchnschr. **2**:777-780 (April 23) 1923.

6. Pende, cited by Santucci, G.: La thérapeutique chirurgicale de l'hypertension artérielle selon la méthode de Pende, Clinique **27**:9-11, 1932.

7. Pieri, G.: La resezione dei nervi splancnici, Ann. ital. di chir. **6**:678-684 (July) 1927.

8. Pereira, A.: Nervi splanchnici: contribuição para o estudio de anatomia e cirurgia dos nervos esplanchnicos, Porto, Portugal, Tipografia Porto Medico, Ltd., 1929.

9. Craig, W. M., and Brown, W. E.: Experiments on the Control of Blood Pressure by Operation on the Sympathetic Nervous System, Proc. Staff Meet., Mayo Clin. **7**:61-64 (Feb. 3) 1932.

10. Peet, M. M.: Splanchnic Section for Hypertension: A Preliminary Report, Univ. Hosp. Bull., Ann Arbor **1**:17-18, 1935.

11. Adson, A. W.: A Report of the Results Obtained by Bilateral Ventral Rhizotomy and Bilateral Resection of Splanchnic Nerves, J. Nerv. & Ment. Dis. **82**:190-193 (Aug.) 1935.

12. Crile, G.: The Clinical Results of Celiac Ganglionectomy in the Treatment of Essential Hypertension, Ann. Surg. **107**:909-916 (June) 1938.

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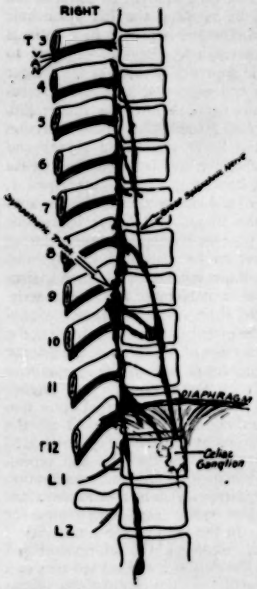
transdiaphragmatically. Grimson [12] in 1941 suggested complete sympathectomy transpleurally.

The surgical experience of one of us (J. L. P.) with hypertension began in 1934, the technic of Peet being followed. In 1936 the technic employed by Adson and Craig was adopted. From 1938 to 1940 the Adson technic combined with a unilateral nephro-omentopexy was used. Since 1940 the supradiaphragmatic technic of Peet and the subdiaphragmatic technic of Adson have been combined by one of us (J. L. P.) in a modified form, approximately the same ganglions and corresponding lengths of the splanchnic nerves being removed without dividing the diaphragm.[13] Since 1942 we have come to believe that a more extensive removal of the sympathetic nervous system is indicated, not only to influence the immediate postoperative results but also to attain, if possible, a more permanent lowering of the blood pressure, the fact being recognized that the sympathetic nervous system has a great capacity for regeneration. The technic was modified considerably as time went on, so that at present an operation is employed in which the ganglions from the fourth thoracic through the second lumbar ganglion are removed in a long, connected segment, as shown in the illustration.



Factual evidence of the extensiveness of the sympathectomy is recorded in all cases by photographing the operative specimen placed on a schematic drawing.

The thoracolumbar sympathectomy as performed by Smithwick has been modified by one of us (J. L. P.) into a more extensive surgical procedure in the hope that a more complete and permanent splanchnic denervation can be accomplished. This method allows one to resect the sympathetic chain at a higher level, including the entire splanchnic system, thus interrupting any smaller unrecognized paravertebral fibers and also any fibers that may descend along the aortic network from high in the thorax.

The diffuse and variable nature of the autonomic nervous system is well recognized. It is known that an incomplete denervation seriously compromises the results in sympathetic nerve surgery of the extremities. There is no reason to assume that a different situation exists in denervation of the splanchnic area. We have gathered experimental evidence, to be published later, that the thoracolumbar operation performed in most of the cases in our series does not result in a complete splanchnic denervation. It is highly probable that there exist fibers or alternate pathways with which we are unacquainted. The operative approach also permits removal of the ganglions on the left side up to the stellate ganglion in patients with angina pectoris, so as either to abolish or to ameliorate their subjective attacks.

OPERATIVE TECHNIC

Early in this series the operation extended from the ninth thoracic through the second lumbar ganglion. While the present technic was being gradually evolved the thoracic sympathetic chain was resected at a higher and higher level. When the last patients in the series were operated on, the resection was carried out from the fifth thoracic to the second lumbar ganglion. Throughout the past twelve months the resection has extended from the third or fourth thoracic through the second lumbar ganglion.

Briefly, the operation as performed today [14] is done under high spinal anesthesia with a sensory level at the third or fourth thoracic segment. This anesthesia is supplemented by pentothal sodium and occasionally curare, which induces shallow, slow respiration, care being exercised to see that the patient is well oxygenated. With the patient in a lateral, slightly prone position, a semicurved incision is made from the level of the sixth rib over the eminence of the paraspinal muscles to the eleventh rib and is curved anteriorly just below the border of the twelfth rib. The iliocostal and longissimus dorsi muscles are separated over the eleventh and eighth ribs, allowing 3 or 4 cm. sections of the ribs to be removed paravertebrally. The line of cleavage between the endothoracic fascia and the parietal pleura is developed. The sympathetic chain and splanchnic nerves are mobilized, and the thoracic chain is divided just above the third or fourth thoracic ganglion after severing the rami communicantes. Below the diaphragm the greater and lesser splanchnic nerves are severed at the point where they enter the celiac ganglion and the least splanchnic nerves as they enter the aorticorenal ganglion. The sympathetic trunk is sectioned below the second lumbar ganglion. In an attempt to prevent regeneration, tantalum clips may be placed on the chain above the third or fourth thoracic ganglion, below the second lumbar ganglion and at the site at which the splanchnic nerves have been divided at the celiac and aorticorenal ganglions. The surgical specimen is now mobilized at the diaphragm, allowing removal of the entire thoracic and lumbar chain with its splanchnic branches through the aperture at the eleventh rib. Although opening of the pleura is carefully avoided whenever possible, this occurred in 5 per cent of our operations. The kidney and adrenal gland are palpated routinely and visualized whenever this seems warranted. Coagulation of bleeding points with the neurosurgical unit and the use of the silk technic for closure allow this surgical procedure to be performed in an average time of one to one and a half hours. The second stage is completed in a similar manner about ten days later.

The immediate postoperative complications in this series of 100 cases were wound infections (minor) in 4 cases; atelectasis in 6, pulmonary embolus in 2 and

13. Poppen, J. L.: Technic for Supradiaphragmatic and Infradiaphragmatic Sympathectomy for Hypertension, Lahey Clin. Bull. 3: 151-158 (July) 1943.

14. Poppen, J. L.: Extensive Combined Thoracolumbar Sympathectomy in Hypertension, Surg., Gynec. & Obst., to be published.

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coronary thrombosis (fatal) in 1. Slight pleural effusion occurred in only 1 case, in which it was necessary to aspirate.

SELECTION OF PATIENTS

Sympathectomy for hypertension has been performed in a large number of cases. An unfavorable impression of the operation is gathered from many of the early reports. However, in the evaluation of this procedure one must remember that many of the early operations were performed on an unselected group of patients, many of whom would not be subjected to surgical intervention at the present time. Results have shown to our satisfaction that this operation is of little or no benefit to those who have suffered severe cardiovascular and renal damage. We believe that the splanchnic operation for high blood pressure in a selected group of cases has definite merit in securing relief of symptoms and lowering of the blood pressure and in prolonging life expectancy.

The patients with early hypertension and those with hypertension of a slowly progressive, mild nature have not been subjected to surgical operation. Usually these cases are satisfactorily treated by conservative medical management. We consider this opinion to be based on sound clinical experience. It has been clearly shown that

TABLE 1.—*Results Indicated by Sodium Amytal Test*

	Good		Fair		Unsatisfactory		
	Indicated	Actual	Indicated	Actual	Indicated	Actual	Total, Actual
Grade 2	51	37	11	13	7	15	3
Grade 3	7	9	13	7	3	6	2
Grade 4	4	1	2	3	2	0	2
Totals	62	47	26	23	12	25	7

in mild cases there is a practically normal life expectancy and that the duration of the disease has no significant effect on good results following operative intervention. It is imperative, however, that these patients receive regular and careful examination. Those showing evidence of progression into a more advanced form of the disease should immediately be considered for surgical treatment.

In well established hypertension there is a pressing need for a test or some method of selecting cases that will indicate the good or poor results to be expected from surgical intervention. The meticulous and extensive studies of these patients done in most clinics represent an attempt to find some such criteria. Several tests are of considerable value in determining the merits of operation, but none of them alone is of great significance. The correlation of all these tests and the clinical picture helps one to predict the probable poor results more accurately than the good results. In too many of our patients the results thus indicated as good subsequently proved to be unsatisfactory (table 1). This may have been due not to the test but to the method of denervation, as previously suggested, but this cannot be true in all the patients who have not been benefited by the operation.

The results indicated by the different preoperative studies in general use will be compared with the actual postoperative results.

The study of hypertensive patients at this clinic consists in a general history and physical and laboratory examinations. Special emphasis is placed on age, duration of disease, the family and obstetric histories, the psyche and cardiovascular and renal studies. The cardiovascular examination includes determination of the nature of the peripheral vessels and the pulse rate and rhythm, roentgen examination of the chest, an electrocardiogram and study of the ocular fundi with the pupils dilated. The renal study includes intravenous pyelograms, phenolsulfonphthalein sodium excretion, a urea clearance test, a urine concentration test, and determination of the nonprotein nitrogen and blood urea nitrogen. The clinical laboratory studies include a complete blood cell count, a urinalysis, a Hinton test and determination of the chlorides, protein and cholesterol. The blood pressure readings are taken every hour for twenty-four hours with the patient at rest in bed and during the sodium amytal test; in a few cases an epidural procaine block test has been utilized.

TABLE 2.—*Distribution by Sex and Age*

Age, Yrs.	Men	Women		Years
50 and over	2	3	Average age of series	36.4
40 to 49	17	14	Average age of women	35.2
30 to 39	18	26	Average age of men	38.1
20 to 29	5	13	Youngest (both women)	15 and 19
10 to 19	0	2	Oldest (women)	54

There were 42 men and 58 women in the series (table 2). The known duration of hypertension is given in table 3.

RESULTS

That symptomatic improvement occurs and that incapacitated persons are rehabilitated has been clearly shown by all who have instituted the different recognized surgical procedures for hypertension. These effects are often present even though the blood pressure is not reduced. In other reported series studies of the heart, ocular fundi and kidneys have demonstrated that reduction of high blood pressure is not harmful but is actually beneficial. A survey of our results is in complete accord with these reports. It is believed that this reduction increases the life expectancy and that the closer the blood pressure approaches the normal range the better are the ultimate results. It seems reasonable not to expect restitution of normal blood pressure in all cases even though the preoperative tests may so indicate. Undoubtedly some pathologic changes have occurred in patients with hypertension,

TABLE 3.—*Known Duration of Hypertension*

Years	No. of Cases
2	31
3 to 5	29
6 to 10	34
11	6

and these may account for the maintenance of the blood pressure at varying degrees above normal.

The large number of factors that cause a variation in blood pressure make comparable conditions for satisfactory studies difficult to obtain. Any one who has attempted to correlate blood pressure readings realizes that it is a most unsatisfying task. At present, however, the blood pressure as a single factor is the best prognostic sign. Until a sufficient number of years have elapsed to prove beyond a doubt that the operative survival curve is materially prolonged as compared with that of the medically treated cases of Keith,

Wagener, and Barker,[15] results must be determined by blood pressure readings, reversal of electrocardiographic changes, roentgenologic evidence that the size of the heart has diminished or remained stationary, improvement in the arteries of the retina and the subjective relief of symptoms.

TABLE 4.—*Results from Extensive Sympathectomy*

Good	47%
Fair	24%
Unsatisfactory	22%
Over 15 mm. diastolic fall and feel normal	7%
No blood pressure fall or incapacitated	15%
(25% received no or less than 3 years benefit from operation)	
Fatal*	7%
Operative mortality	0.5%
Case mortality	1.0%

* Six patients died since dismissal from hospital; 1 patient died two days after the second stage operation from a coronary occlusion.

Peet [16] has indicated by his results that the operative survival curve is prolonged in hypertension grades 3 and 4.

The demonstration of an increase in life expectancy together with a more comfortable existence is a real criterion and cannot be refuted. All indications point in this direction, but many years of careful follow-up must be instituted to verify this.

The preoperative blood pressure was considered to be that taken on admission to the clinic or at the patient's last visit before hospitalization. It was frequently the maximal blood pressure reading taken. The admission blood pressure was taken as the preoperative pressure because it more closely approximated the conditions under which the follow-up blood pressure readings were taken, with the patient ambulatory in the clinic or in the referring physician's office. The sodium amytal test revealed the minimal blood pressure reading.

CRITERIA FOR BLOOD PRESSURE RESULTS

The blood pressure results (tables 4 and 5) were considered good when the patient was symptomatically relieved of his hypertensive complaints and was in good physical condition, and when the blood pressure dropped to and remained at a level generally accepted as nondangerous. In the literature, a blood pressure of 150 mm. systolic and 100 mm. diastolic has frequently been considered as a maximal normal one.

TABLE 5.—*Results from Extensive Sympathectomy*

	Patients	Good	Fair	Unsatisfactory	Fatal*
Grade 2	72	39	16	16	1
Grade 3	19	4	5	4	3
Grade 4	9	4	0	2	3
Totals	100	47	24	22	7

* See footnote, table 4.

It has also been used to indicate a good operative result. To set up such an arbitrary figure would make some of our good results fair and some of our poor results good. For example, with a blood pressure of 142 mm. systolic and 104 mm. diastolic in a rehabilitated man working full time who is in excellent health and feels well, the result must be considered fair rather than good if an arbitrary standard is used. On the other hand, a patient with anasarca whose blood pressure is 132 mm. systolic and 92 mm. diastolic or a patient with recurrent coronary infarction with a blood pressure of 125 mm. systolic and 95 mm. diastolic would have to be considered to show a good result. Surely these patients had poor results, regardless of blood pressure. With this in mind, we have carefully selected from this series the cases in which we consider the results to have been good.

The patients with fair results were chosen in a similar manner, except that their postoperative blood pressure readings were higher than those of the group with good results. They have sustained and maintained a lower blood pressure in a relatively nondangerous zone. These patients were as comfortable and as well off in general as those with good results, except for a higher blood pressure.

TABLE 6.—*Cases Showing Evidence of Regeneration of Sympathetic Nerves and Possible Candidates for Further Surgical Intervention*

		Operation		Follow-Up	
		Date		Date	
Case	Preoperative Blood Pressure	Mo. Yr.	Ganglions Resected	Mo. Yr.	Blood Pressure
5	210/140	9 42	T10-L2	11 43	115/ 76
				2 46	150/115
7	220/140	11 42	T8-L2	8 43	122 (better)
			T10-L2	9 44	130/ 80
				11 45	150/120
15	220/140	1 43	T9-L2	8 43	145/105
			T8-L3	2 46	220/145
21	250/150	3 43	T8-L1	10 43	150/100
			T8-L2	7 44	154/110
				11 45	180/120
22	220/150	3 43	T8-L1	7 43	135/110
			T8-L2	2 44	145/110
				4 45	204/128
				11 45	205/142
				2 46	222/150
37	210/120	9 43	T7-L2	3 44	164/110
			T8-L2	2 45	170/108
				4 45	210/120
38	210/140	9 43	T8-L2	3 44	138/100
			T7-L2	7 44	118/ 85
				11 45	156/114
				1 46	200/156
51	240/140	4 44	T7-L2	6 44	165/ 95
			T7-L7	10 44	170/ 94
				2 45	180/100
				6 45	170/ 85
				11 45	190/106
				2 46	222/122

The unsatisfactory results were those that occurred in patients who had no reduction in blood pressure, even though its level might qualify them for a rating of fair. For example, in a patient with a preoperative blood pressure of 170 mm. systolic and 100 mm. diastolic and a postoperative blood pressure remaining at this level, with recognition of the fact that hypertension is a progressive disease, it is possible that the progression was retarded or stopped by the operation. Nevertheless, these patients should be included in the group with unsatisfactory results. Patients with blood pressures that have been reduced but remain at 200 mm. systolic and 120 mm. diastolic, regardless of symptomatic relief, are included in the unsatisfactory group, because we consider these pressures to be in the danger zone. Also, patients ill from complications of hypertensive, cardiovascular or renal disease, such as cardiac decompensation and coronary infarction, are included in the group with unsatisfactory results, although the drop in blood pressure was good or could be classified as good or fair. As would be expected, the

15. Keith, N. M.; Wagener, H. P., and Barker, N. W.: Some Different Types of Essential Hypertension: Their Course and Prognosis, Am. J. M. Sc. 197:332-343 (March) 1939.

16. Peet, M. M., and Isberg, E. M.: The Surgical Treatment of Essential Hypertension, J. A. M. A. 130:467-473 (Feb. 23) 1946.

relief of the hypertensive symptoms occurred less frequently in the group with unsatisfactory results.

We consider that a satisfactory result on the blood pressure has been obtained in 71 per cent of our cases. The blood pressure has been favorably affected in another 7 per cent. A poor result has occurred in 15 per cent (table 4). These cases comprise those in which no blood pressure response was obtained and those in which the patient was physically ill from hypertensive, cardiovascular or renal disease. Regardless of data on blood pressure, we believe that this operation must lengthen life to be retained as a sound surgical procedure. At present we believe that it increases longevity besides relieving symptoms and lowering the blood pressure. The known duration of the disease has no effect on the results in regard to blood pressure if the patient is selected for surgical intervention. However, from our early experiences, the patients selected are not over 50 years of age except in a few cases.

TABLE 7.—*Cases Indicating that Ejaculatory Mechanism May Not Be Entirely Controlled by Either the First or Second Lumbar Ganglion but More Likely Distributed Throughout the Lumbar Ganglions*

Case	Ganglions Resected * Left	Right	
2	L2	L2	No ejaculation; potency unchanged
5	L2	L2	Libido diminished; power of ejaculation diminished
15	L2	L3	Libido and potency unchanged; ejaculation normal
27	L2	L3	Libido and potency unchanged; ejaculation normal
31	L2	L2	Libido and potency unchanged; ejaculation normal
35	L3	L2	Impotency preoperatively; libido, potency and power of erection improved; ejaculation normal; baby boy
38	L2	L2	No ejaculation; no coition except in morning (poor blood pressure result)
44	L2	L2	Libido and potency diminished; ejaculation incomplete
56	L3	L3	Libido and potency diminished; ejaculation absent at first; normal later
59	L3	L2	Libido and potency unchanged; no ejaculation
61	L2	L2	Libido and potency unchanged; no ejaculation
65	L2	L2	Libido and potency unchanged; no ejaculation
72	L2	L2	Libido and potency unchanged; no ejaculation
84	L2	L2	Libido and potency unchanged; ejaculation 75 per cent of normal
85	L2	L1	Impotency preoperatively; libido and potency much improved; ejaculation normal
105	T12	L2	Libido and potency unchanged; no ejaculation

* Lumbar ganglions given indicate lowermost extent of resection.

CONTRAINDICATIONS TO SURGICAL INTERVENTION

The contraindications to surgical intervention are: cardiac failure; renal failure, and severe retinal arteriosclerosis of the silver wire type, with all tests indicating a fixed type of blood pressure. In addition, patients with early and mild cases of hypertension are not operated on. Considerable caution should be exercised before resorting to operative intervention in patients with angina pectoris, auricular fibrillation or gallop rhythm. Cerebrovascular accidents are not in themselves a contraindication to surgical procedures, as is indicated by our results.

INDICATIONS FOR SURGICAL INTERVENTION

Operative intervention is advised in progressive essential hypertension regardless of age (under 50), sex or the known duration of the disease if the ocular fundi (tables 6 and 7) are of grades 2, 3 or 4 and if clinical tests have indicated a good or fair result. With grade 4 ocular fundi, especially in young people, an operation is advised as early as possible if the cardiac and renal functions are adequate. The usual clinical tests are of little value. In some of these cases results were excellent, even though the clinical tests indicated poor ones. Except in a few cases, surgical intervention is not advised in patients with ocular fundi of grade 2 or 3 in whom the tests show no evidence of a favorable blood pressure response. It is in this group that emotion is stirred and the desire to do everything possible to help is aroused. On the other hand, most of the deaths and many of the poor results have occurred in this same group.

TABLE 8.—*Results According to Age of Patient*

Age, Yrs.	Good Cases	Good %	Fair Cases	Fair %	Poor Cases	Poor %
10 to 19	2	100.0	0	0	0	0
20 to 29	7	46.7	3	20.0	5	33.3
30 to 39	19	48.7	10	25.7	10	25.7
40 to 49	10	38.4	9	34.6	7	26.9
50	1	50.0	0	0	1	50.0
	39		22		23	

INDICATIONS FOR REOPERATION

Patients whose blood pressure has not been materially changed by operative intervention except for a temporary postural hypertension are not benefited by the removal of more thoracic ganglions. A patient whose blood pressure has shown definite lowering for a period of one to two years, followed by a return to previous levels, and who has had a recurrence of subjective symptoms should be considered a candidate for reoperation. If tests demonstrate regeneration of the sympathetic fibers, reoperation is justifiable.[16a] It is our hope to prevent regeneration as far as possible by executing a fairly complete removal of the splanchnic system at the initial operation. Reoperation necessarily is definitely more difficult than the primary procedure. That resumption of high blood pressure may take place after a number of years is indicated by the 8 cases presented in table 8. It is in these patients that reoperation seems justifiable.

EFFECTS OF EXTENSIVE SYMPATHECTOMY ON THE SEXUAL POWERS

That the lumbar ganglions have a definite influence on the ejaculatory power in the male is well known and is indicated by the following results of surgical operation in this series. Forty-one per cent of the male patients had normal ejaculation after the operative procedure and 21 per cent had no ejaculation. In 18 per cent the power of ejaculation was diminished. Libido and potency were the same as before operative intervention in 65 per cent, diminished in 23 per cent and improved in 12 per cent. That the power of ejaculation is predominantly controlled by either the first or second lumbar ganglion is not substantiated by the operative results in 16 cases studied from that point of view (table 9).

TABLE 9.—*Results According to Known Duration of Disease*

Age, Yrs.	Good Cases	Good %	Fair Cases	Fair %	Poor Cases	Poor %
2 and under	14	51.9	4	14.8	9	33.3
3 to 5	10	47.6	6	28.6	5	23.8
6 to 10	11	37.9	10	34.5	8	27.6
11 and over	3	50.0	2	33.3	1	16.6
	38		22		23	

16a. Dr. Kurt Richter, Johns Hopkins Hospital, has studied many of our patients at varying intervals postoperatively from the standpoint of skin resistance.

It seems reasonable to assume that in a system so variable as to the structure of the ganglions and the number of rami, the ejaculatory power may at times be distributed equally in the lumbar ganglions, even though most frequently one must assume that the first or second lumbar ganglion is predominantly in control.[17] Our results do not prove which of these is the more dominant, but there is evidence that resection of both of them frequently interferes with the ejaculatory power. One of the patients who was impotent and childless had been married for ten years before the operation. He had never used any contraceptive devices. Resection included the first and second lumbar ganglions on both sides. Twenty-eight months after the surgical procedure he stated that the power of erection, libido and potency were excellent and ejaculation was normal. This patient now is the father of a baby boy.

Abnormal change were not noted in the females. Two women have completed pregnancy since the operation. In the first, the preoperative blood pressure was 220 mm. systolic and 150 mm. diastolic. Surgical intervention was performed in October 1942 with removal of the tenth thoracic to the second lumbar ganglions bilaterally. The prenatal blood pressure was constant at 120 mm. systolic and 80 mm. diastolic. A full term delivery occurred on April 9, 1945. In December 1945 the blood pressure was 120 mm. systolic and 80 mm. diastolic.

In the second case the preoperative blood pressure was 265 mm. systolic and 152 mm. diastolic. Operative intervention was performed in March 1944, with resection of the seventh thoracic through the second lumbar ganglion bilaterally. In May 1944 the blood pressure was 170 mm. systolic and 115 mm. diastolic. In the fourth month of pregnancy it was 190 mm. systolic and 110 mm. diastolic, after which it gradually rose to 240 mm. systolic and 140 mm. diastolic. After delivery, which occurred at eight months on July 2, 1945, it returned to 180 mm. systolic and 110 mm. diastolic.

UNILATERAL KIDNEY DISEASE

In this series of 100 cases of essential hypertension, 6 nephrectomies were performed in combination with extensive bilateral sympathectomy. Associated hypertension and unilateral kidney disease should be treated as a separate entity; that is, if the latter is sufficient to warrant removal of the kidney, this should be done. The kidney should not, however, be removed solely in the hope that this will result in a lower blood pressure. In fact, it is dangerous to remove functioning renal tissue from a patient who may eventually die from uremia. There are, however, cases on record in which the blood pressure has been lowered to normal by removal of a diseased kidney. In hypertensive patients who undergo a nephrectomy for unilateral kidney disease, we perform a thoracolumbar sympathectomy at the same time. If the blood pressure remains normal for ten days to two weeks the patient is discharged. If it returns to its preoperative level, as is the rule in all unilateral operations for hypertension, the sympathectomy is completed on the other side. In our 6 cases of nephrectomy combined with bilateral extensive sympathectomy the response of the blood pressure was good in 4, fair in 1 and unsatisfactory in 1. Brief reports of these cases follow.

17. de Takats, G., and Helfrich, L. S.: Sterility of the Male After Sympathectomies, J. A. M. A. 117: 20-21 (July 5) 1941.

Case 13.—The patient had a nonfunctioning kidney. The ocular fundi were grade 4. The microscopic diagnosis was hydronephrosis with nephrosclerosis. The blood pressure result was good.

Case 18.—The patient had a tumor in the lower pole of the right kidney. The ocular fundi were grade 2. The microscopic diagnosis was renal cell carcinoma. The blood pressure result was unsatisfactory.

Case 19.—The patient had a nonfunctioning kidney. The ocular fundi were grade 2. The microscopic diagnosis was chronic pyelonephritis. The blood pressure result was fair.

Case 64.—A cyst of the right kidney was shown by intravenous pyelogram. The ocular fundi were grade 2. The microscopic diagnosis was chronic pyelonephritis. The blood pressure result was good.

Case 71.—Nephrolithiasis in a contracted kidney was shown by intravenous pyelogram. The ocular fundi were grade 2. The microscopic diagnosis was nephrolithiasis and healed pyelonephritis with arteriosclerosis. The blood pressure response was good.

Case 95.—Disease of the right kidney was shown by intravenous pyelogram. The ocular fundi were grade 2. The microscopic diagnosis was healed pyelonephritis. The blood pressure result was good.

HEMIPLEGIA

Our experience with hemiplegia has been limited, since only 3 patients in this series have had cerebrovascular accidents at any time during the course of their disease. In general hemiplegia is not a contraindication to surgical intervention; if the patient is a good risk in other respects, the operation should be performed. The reports of these cases are as follows.

Case 8.—The ocular fundi were grade 4. The patient suffered hemiplegia on the left side two days after the first stage of the operation. The second stage was performed at the usual time. At present there is a good blood pressure response, and the hemiplegia is almost completely cleared. On May 15, 1945 closure of ruptured peptic ulcer occurred. The patient plays golf and drives his automobile.

Case 22.—The ocular fundi were grade 2. The patient suffered a hemiplegia in February 1943. Extensive sympathectomies were performed in March 1943. At the end of one year the blood pressure result was considered fair. At the end of three years it was poor. The only complaints at present are fatigue and worry about the blood pressure and the possibility of another hemiplegia. The ocular fundi are grade 2, with decided segmental intermittent vasoconstriction. The patient has returned to the hospital for reevaluation of his case, with the possibility of further resection.

Case 26.—The ocular fundi were grade 3. Surgical intervention was performed in May 1943. A fair blood pressure result was obtained and has been maintained. On Aug. 16, 1944 a mild hemiparesis occurred on the right side. The patient returned to work in three weeks and has had no complaints except some numbness on the right side.

CORONARY THROMBOSIS

There were 3 cases of myocardial infarct. Such patients are exceedingly poor risks, and it is doubtful that their life expectancy can be prolonged by lowering the blood pressure.

Case 70.—A man aged 51 had known hypertension of six years' duration. He complained of headache, dizziness, nervousness and insomnia. He had a possible coronary thrombosis on Nov. 1, 1942. The ocular fundi were grade 3. The preoperative blood pressure was 250 mm. systolic and 146 mm. diastolic to 205 mm. systolic and 140 mm. diastolic; with the sodium amytal test it was 140 mm. systolic and 100 mm. diastolic. At operations performed September 6 and September 20 the sixth thoracic to the second lumbar ganglions were resected. The postoperative blood pressure was 190 mm. systolic and 100 mm. diastolic before death, which occurred suddenly two days after

the second stage operation, on Sept. 22, 1944, after gasping, cyanosis and a falling pulse. No autopsy was performed. The clinical diagnosis was coronary thrombosis.

CASE 82.—The patient was a 45 year old man with known hypertension for nine years. Myocardial infarction had occurred eight years previously, and more recently there had been symptoms of angina pectoris. The ocular fundi were grade 2; there was auricular fibrillation.

The preoperative blood pressure was 200 mm. systolic and 150 mm. diastolic. With the sodium amytal test it was 150 mm. systolic and 90 mm. diastolic. The two stage operation was performed, with resection from the sixth thoracic to the second lumbar ganglion and from the sixth thoracic to the first lumbar ganglion, in January 1945. The patient subsequently had an anterior myocardial infarction. He gradually recovered and returned to work but remained in poor condition. In September 1945 he complained of dyspnea, edema of the ankles and attacks of precordial distress. He was advised to stop work and go to bed. In January 1946, after three months in bed, he had cardiac decompensation with anasarca despite intensive medical treatment.

CASE 97.—The patient was a 33 year old man with known hypertension for four years. He complained of severe headache, nausea, vomiting and giddiness. The preoperative blood pressure was 180 mm. systolic and 120 mm. diastolic. With the sodium amytal test it was 110 mm. systolic and 75 mm. diastolic. The ocular fundi were grade 2. The patient was considered an ideal candidate for splanchnicectomy, which was performed in May, 1942: the tenth thoracic to the second lumbar ganglions were removed, and after the second stage the patient suffered a pulmonary embolus from the left thigh. He gradually recovered, and the blood pressure result was considered fair. He returned to his work as a banker. Within the last few months he has had at least two coronary attacks. At present he has no thoracic pain, angina or cardiac decompensation. The blood pressure is 125 mm. systolic and 90 mm. diastolic. The patient has recently applied for compensation for complete disability. The result is considered to be poor.

ANGINA PECTORIS

Eight patients had angina pectoris. In these cases, also, the likelihood of death or a poor result is definitely increased.

CASE 4.—The patient was a 40 year old man with known hypertension of three years' duration. He complained of severe occipital headaches. The preoperative blood pressure was 185 mm. systolic and 115 mm. diastolic to 270 mm. systolic and 150 mm. diastolic. With the sodium amytal test it was 160 mm. systolic and 115 mm. diastolic to 200 mm. systolic and 125 mm. diastolic. The postoperative pressure was 150 mm. systolic and 90 mm. diastolic to 200 mm. systolic and 125 mm. diastolic.

This patient had a normal blood pressure in 1939. He was treated in the medical department in 1940, at which time the hypertension was first observed. The two stage operation was performed on Sept. 11 and 23, 1942, removing the tenth thoracic to the second lumbar ganglion, right and left. On his discharge from the hospital on October 15, the blood pressure was 150 mm. systolic and 90 mm. diastolic to 200 mm. systolic and 125 mm. diastolic. The patient was symptomatically improved and had no headaches. He returned to the hospital in January 1943 with complaints of nocturnal dyspnea and edema of the ankles for four weeks. There was anasarca. The ocular fundi were grade 4. The congestive failure did not respond to medical management. The nonprotein nitrogen was within normal range until April 28, 1943, when it was 58 mg. per hundred cubic centimeters. It gradually rose to 175 mg. on July 22, 1943. The blood pressure averaged 250 mm. systolic and 130 mm. diastolic for several months and then fell precipitously to 140 mm. systolic and 100 mm. diastolic two days before the patient's death, which occurred on Aug. 11, 1943 from uremia. Autopsy revealed cardiac and renal failure, cardiac hypertrophy and anasarca and nephrosclerosis.

CASE 11.—The patient was a 46 year old white man with known hypertension of five years' duration. He complained of headache, angina pectoris and episodes of cerebral spasm. Ocular fundi were grade 2, with grade 3 to 4 arteriolar sclerosis of the retinal vessels. The preoperative blood pressure was 165 mm. systolic and 110 mm. diastolic to 240 mm. systolic and 120 mm. diastolic. With the sodium amytal test it was 110 mm. systolic and 60 mm. diastolic. The patient accepted the operative intervention, knowing that he had little chance for relief. The two stages were performed on Nov. 3 and 12, 1942. The postoperative blood pressure was 200 mm. systolic and 100 mm. diastolic. In May 1943 the administration of potassium thiocyanate was tried, without relief of the headaches and with no blood pressure response. The patient never fully recovered from the operation and died on December 29 of a heart attack. No postmortem examination was made.

CASE 42.—The patient was a 47 year old woman with known hypertension of ten years' duration. She complained of headache, dizziness, nausea and vomiting. The ocular fundi were grade 4. The case was diagnosed at admission as one of possible brain tumor. The preoperative blood pressure was 280 mm. systolic and 200 mm. diastolic. With the sodium amytal test it was 140 mm. systolic and 100 mm. diastolic. The surgical operations were performed in November 1943. In June 1944 the fundi were normal, there was a rare complaint of mild headache and the patient was working eight hours a day. The postoperative blood pressure was 180 mm. systolic and 110 mm. diastolic to 168 mm. systolic and 100 mm. diastolic. On July 5, 1945, when the blood pressure was 140 mm. systolic and 85 mm. diastolic, a hysterectomy and bilateral salpingo-oophorectomy were performed. On August 2, there were no complaints and the blood pressure was 154 mm. systolic and 82 mm. diastolic. The patient was considered to have a good result but died suddenly of a cerebral hemorrhage in another city on Oct. 20, 1945.

CASE 74.—The patient was a 41 year old man with known hypertension of three years' duration. He complained of headache, giddiness and angina. The preoperative blood pressure was 260 mm. systolic and 140 mm. diastolic. With the sodium amytal test it was 110 systolic and 84 diastolic. The ocular fundi were grade 2. The operative intervention was performed in September 1944. The angina disappeared in two to three months. The patient could not tolerate glyceryl trinitrate, even $\frac{1}{500}$ grain (0.12 mg.) causing giddiness and weakness. Papaverine hydrochloride was used in its place, with satisfactory results. The blood pressure is now 145 mm. systolic and 108 mm. diastolic. The angina has completely disappeared, and there are no complaints. The patient is working and has recently passed a general examination for employment by the Western Electric Company.

CASE 77.—The patient was a 46 year old woman with known hypertension of ten years' duration. She complained of angina pectoris and nervousness. The ocular fundi were grade 2. The preoperative blood pressure was 270 mm. systolic and 150 mm. diastolic. With the sodium amytal test it was 150 mm. systolic and 100 mm. diastolic. The operation was performed in April, 1945; from the fifth thoracic to the second lumbar ganglions were removed bilaterally. There were severe attacks of angina subsequent to the surgical intervention. These continued for six months. The patient took $\frac{1}{300}$ grain (0.15 mg.) of glyceryl trinitrate, following which the angina gradually subsided. At present it is not nearly so severe or so frequent as it was before the operation. The patient is comfortable during warm weather. The blood pressure is 218 mm. systolic and 122 mm. diastolic.

CASE 100.—The patient was a 50 year old woman with known hypertension of nine years' duration. She complained of headache, tenseness and angina pectoris. The preoperative blood pressure was 210 mm. systolic and 130 mm. diastolic. With the sodium amytal test it was 165 mm. systolic and 100 mm. diastolic. The ocular fundi were grade 2. At the operation performed in May, 1945, the fifth thoracic to the second lumbar ganglions, right and left, were removed. The angina has gradually become less in severity and frequency.

CASE 45.—The patient was a 25 year old woman with known hypertension of two years' duration. She complained of severe headache, nervousness and tension. The ocular fundi were grade 4. The patient insisted on surgical intervention. The preoperative blood pressure was 240 mm. systolic and 175 mm. diastolic to 220 mm. systolic and 150 mm. diastolic. With the

sodium amytal test it was 200 mm. systolic and 150 mm. diastolic. The first stage operation was performed on Nov. 14, 1943. On discharge from the hospital December 16, after this operation, the blood pressure was 190 mm. systolic and 140 mm. diastolic. On three occasions over a liter of fluid was removed from the pleural cavity. On March 15, 1944 the blood pressure was 244 mm. systolic and 160 mm. diastolic; the nonprotein nitrogen level was 52 mg. per hundred cubic centimeters. The patient died on April 6, 1944 of malignant hypertension with hypertensive cardiovascular renal disease.

CASE 57.—The patient was a 36 year old man with known hypertension of eight years' duration. He complained of occipital headache, blurring vision and angina pectoris. The ocular fundi were grade 3. A gallop rhythm was present. The preoperative blood pressure was 220 mm. systolic and 130 mm. diastolic to 200 mm. systolic and 130 mm. diastolic. With the sodium amytal test it was 166 mm. systolic and 86 mm. diastolic. The two stages of the operation were performed on March 5 and April 4, 1944. No postoperative difficulties were encountered. The blood pressure on discharge was 155 mm. systolic and 100 mm. diastolic. The patient died suddenly on Dec. 21, 1944, probably from coronary thrombosis.

COMMENT

The final opinion as to the merits of thoracolumbar sympathectomy as a means of treatment of essential hypertension must necessarily remain open until the surgical and medical survival curves can be compared. Since the operative mortality is 0.5 per cent and since several previous reports, as well as those of our series, indicate that a substantial number of patients obtain a good result, as evidenced by an arrest of the disease which allows a considerably more comfortable existence, we can arrive at no other opinion than that the procedure is well worth while in a selected group of patients.

TABLE 10.—*Summary of Data on Blood Pressure in Three Cases*

Case	Preoperative Blood Pressure	Date of Operation		Follow-Up		
				Date		Blood Pressure
		Mo.	Yr.	Mo.	Yr.	
9	210/140	11	42	6	43	140/100
				3	45	145/110
				11	45	135/ 94
				2	46	128/ 90
20	212/120	3	43	6	43	190/110
				9	43	150/100
				4	44	135/ 90
				8	45	140/ 90
				2	46	140/ 90
47*	280/130	11	43	6	44	168/100
				10	44	178/132
				7	45	140/ 85
				8	45	154/ 82

* Died Oct. 20, 1945 of a cerebrovascular accident.

One must not fail to realize that hypertension is the leading cause of death and is four times as deadly as cancer. In many cases it causes as much discomfort to the patient as does cancer, in which one does not hesitate to make use of surgical means or roentgen therapy in an attempt to cure the disease or to lessen suffering. It is true that sympathectomy in the treatment of hypertension may eventually be replaced by well directed operation on the blood pressure centers intracranially or by the discovery of certain chemical or hormonal substances that will cure the disease. On the other hand, this may not occur in the present generation. Therefore, a surgical procedure that gives reasonable assurance of correcting or lessening the effects of the disease should be instituted until a more efficacious treatment has become available.

The criticism of this operation lies in the fact that the patient is hospitalized for a period of about four weeks. Four days of this is spent in study. Many patients have considerable postoperative neuralgia, which lasts for several days or several weeks after their return home. Because of the alterations in blood pressure produced by changes in position, the legs and abdomen may need firm pressure bandages or support so as to avoid syncope or palpitation for several weeks or months after the operative procedure until a thoroughly stable blood pressure has been established.

The selection of patients for surgical intervention cannot be decided entirely by dogmatic criteria. That age should be considered an important factor is based on common sense. Certainly, most persons who have reached the age of 50 have thickening of the walls of the arterial system, regardless of whether this fact can be demonstrated grossly. Much of course, depends on heredity. Many of the patients operated on early in our experience were over 55 years of age and showed extensive arterial changes. We concluded that in any patient 50 years of age or over there should be a degree of hesitancy in advising surgical intervention.

Emphasis must be placed on the longevity of the blood relatives. It is logical to assume that a family history of hypertension of short duration, causing early breakdown of the cerebrovascular and renal systems, is potentially much more serious than a history in which the blood relatives have had hypertension for many years but have lived a normal span of life, finally dying of cerebral hemorrhage or uremia.

It was stated previously herein that in early cases and those with grade 1 ocular fundi the patients do not require surgical intervention and can be satisfactorily handled by medical treatment. This opinion may change as time goes on and more information concerning the life expectancy in such patients on medical treatment alone becomes available. Certain patients in the group with grade 1 ocular fundi may actually need surgical intervention, especially when intracranial symptoms can be directly attributed to the hypertension. It is possible that more of these patients should be subjected to surgical intervention than we have heretofore thought necessary.

The cases classified as grade 4, with choking of the optic disks and retinal hemorrhages occurring in relatively young patients and with a fulminating or rapidly progressing hypertension, form a group in which operative intervention should be performed as soon as possible, because when this has been delayed until after elevation of the nonprotein nitrogen has taken place, the results have been poor.

The ultimate results of the operation cannot be predicted from the immediate postoperative blood pressure readings. There is always a dramatic lowering for three or four days after the first stage of the sympathectomy. The blood pressure is usually at the preoperative levels on the seventh postoperative day. The level is again dramatically lowered for several days after the second and final stage of operation and does remain so in many cases. In others, however, there is a rise on the seventh day or at the time the patient begins to become more active, and the blood pressure may reach its preoperative level except in the sitting or standing position when there is a decided postural hypotension. The lower blood pressure level may take place in a few days or weeks; that this lowering may

be gradual and occur over a period of several months is indicated by the data on the blood pressure in 3 cases summarized in table 10.

SUMMARY

One hundred consecutive patients were subjected to extensive thoracolumbar sympathectomy by the same surgeon and carefully followed for one and a half to four years after operation.

The results of operation were as follows: good, 47 per cent; fair, 24 per cent, and unsatisfactory, 22 per cent. The operative mortality was 0.5 per cent (case mortality, 1 per cent). Six per cent of the patients died subsequent to their dismissal from the hospital.

MEDICAL EVALUATION OF THE SURGICAL TREATMENT OF HYPERTENSION

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Common sense and clinical and scientific hypothesis as well hold that the unfavorable progress and end of patients with hypertension is related to the height of the blood pressure. Not the only test but an important test of any therapeutic procedure in continued arterial hypertension is the effect on the level of the blood pressure. Since it has been observed that most patients with essential hypertension have well defined spontaneous lowering of the blood pressure and that a considerable number have normal blood pressure levels transiently (23 per cent of early benign cases, 11 per cent of moderate cases, 8 per cent of advanced cases and even 8 per cent of malignant cases), the duration of the hypotensive effect and a fall to normal or near normal are important criteria for critical evaluation. As a medical observer I have been intimately associated with the surgical treatment of hypertension first for seven years and then after a hiatus of three years again for the past year, and certain observations in the course of this experience have been recorded (table 1).

1. *Interval Medical Evaluation of the Hypotensive Effect of Sympathectomy for Essential Hypertension.*—In September 1940 after five years of careful preoperative and postoperative observation of 74 patients with all grades of essential hypertension treated by supradiaphragmatic sympathectomy, it was found that 9, or 12 per cent, had normal or near normal blood pressures (150 mm. of mercury systolic and 110 mm. of mercury diastolic or less). The 74 patients were fairly equally divided among the four grades of hypertension. The favorable results occurred chiefly in patients with mild variable or moderate hypertension, grades 1 and 2.

Hypertension.—Grade 1: Variable hypertension, 150 to 200 mm. systolic and 100 to 120 diastolic, 23 per cent falling to normal levels (140 systolic and 90 diastolic or less) with rest or sedatives, occasionally under stress going above the limits noted; no changes or minimal changes in fundi as represented by narrowing of arterioles; minimal or no changes in heart or kidneys. This is early or mild hypertension.

Grade 2: Variable hypertension, 170 to 250 mm. systolic and 110 to 130 diastolic, usually at the lower levels, occasionally even lower, but falling to normal with rest or a sedative in 11 per cent, the fundi showing arteriovenous compression with widening of the light reflex, narrowing and caliber changes in the arterioles; the heart showing slight enlargement or prominence in the region of the left ventricle by roentgen examination; the urine showing no change or slight grades of albuminuria and minimal numbers of formed elements in the sediment; the renal function being normal or slightly impaired by concentration and intravenous phenolsulfonphthalein tests. This is moderate hypertension.

Grade 3: Variable (but usually upward) hypertension, almost always over 170 mm. systolic and 110 mm. diastolic but observed normal levels in 8 per cent; the fundi showing arteriovenous compression, caliber changes in arterioles, wide light reflex, often exudates or hemorrhages; the heart often enlarged commonly with symptoms and signs of actual or impending congestive failure or symptoms of anginal failure; the urine often showing albumin and casts; renal function often impaired, but actual failure (uremia) unusual; cerebral accidents sometimes occur. This is late benign hypertension, frequently of many years' standing.

Grade 4: Blood Pressure, especially the diastolic, usually decidedly high although exceptionally normal blood pressure levels may be observed; difficulties often of recent onset in a patient almost always under 50, often under 40 years of age, the cardinal sign being edema of the optic disks with or without exudate and hemorrhage; cardiac enlargement and congestive heart failure may be present; renal impairment and failure are common. This is malignant hypertension.

My surgical colleague at the time (Dr. R. H. Smithwick), as this experience developed, had suggested that a more extensive operation interrupting all sympathetic

TABLE 1.—*Effect of Sympathectomy in Essential Hypertension*

Operation	Date of Survey	No. of Patients	Duration of Follow-Up	Percentage Fall to 150/110 or Less
Dorsal sympathectomy.....	1940	74	5 yrs. ±	12%
Dorsolumbar sympathectomy	1940	29	Mos. to 2 yrs.	60%
Dorsolumbar sympathectomy	1941	40	Up to 3 yrs.	55%
Dorsolumbar sympathectomy	1943	101	62 for 1 yr. 22 for 1-2 yrs. 14 for 2-3 yrs. 3 for 3-4 yrs.	37.6%
Dorsolumbar sympathectomy	1946	72	Mos. to 3 yrs.	33%
Dorsolumbar sympathectomy	1946	68	3 or more yrs.	23.5%
Medical regimen incl. KSCN...	1943	100	Mos. to 4 yrs.	17%

innervation of the splanchnic bed would reduce the possibility of regeneration and might equal the brilliant results obtained in these few patients and possibly extend the benefits to a significantly larger proportion. He gradually extended the operation first on one side, later on both sides to include the sympathetic chain from above the ninth dorsal to below the first or second lumbar ganglion.[1]

In November 1940 29 patients had been treated by more extensive operations, 20 of them showing excellent results on the level of the blood pressure. For the first time patients with severer grades of hypertension were benefited. Seven of 10 patients graded 3 and 3 of 7 patients graded 4 appeared to have been helped much in respect to the blood pressure level, whereas none of the 34 patients equally divided between grades 3 and 4 had been so benefited by supradiaphragmatic sympathectomy.

The follow-up period on these patients with the more extensive operations at that time was short (a few months up to two years), but it then seemed clear that the more extensive the operation the more likely the excellent results on the level of the blood pressure: all sympathetic ganglions and nerves from above the ninth dorsal to below the first lumbar and preferably below the second lumbar segment should be removed

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1. Smithwick, R. H.: A Technique for Splanchnic Resection for Hypertension, Surgery 7:1 (Jan.) 1940.

on both sides. About a year later 49 patients had been treated by bilateral dorsolumbar sympathectomy (from the ninth dorsal to below the first or second lumbar ganglion) and were compared with patients who were closely similar in regard to sex, grade of disease and duration of known hypertension and who were on a medical regimen. Twenty-six, or 53 per cent, of these 49 patients had normal or near normal blood pressures.

Comparison, in respect to the blood pressure level, of the surgically-treated with concurrently medically-treated patients of closely similar age, sex, degree and duration of hypertension and time of follow-up was as follows:

Grade 1 hypertension: Of 12 patients surgically treated 10, or 83 per cent, were normal or near normal; of 26 patients medically treated 7, or 27 per cent, were normal or near normal.

Grade 2 hypertension: Of 7 patients surgically treated 5, or 70 per cent, were normal or near normal; of 7 patients medically treated 1 (14 per cent) was normal or near normal.

Grade 3 hypertension: Of 18 patients surgically treated 4, or 22 per cent, were normal or near normal; of 10 patients medically treated 1 (10 per cent) was normal or near normal.

Grade 4 hypertension: Of 12 patients surgically treated 5, or, if 2 with blood pressures slightly over 150 systolic and 110 diastolic are included, 7 (57 per cent) were near normal; all the patients with malignant hypertension who were medically followed died under observation or soon after or were lost and presumed dead. It appeared that grades 1, 2 and 4 hypertensive patients had the best chance of receiving benefit, that in any case in a parallel follow up of matched cases, dorsolumbar sympathectomy was definitely superior to medical treatment in controlling the blood pressure level.

In November 1943 the status of 101 patients was reviewed. All had been treated by dorsolumbar sympathectomy (including at least resection from the ninth dorsal through the first lumbar ganglion on both sides). Sixty-two had been followed for one year or less after operation, 22 for one to two years, 14 for two to three years and 3 patients up to four years. Thirty-eight, or nearly 40 per cent, had normal or near normal blood pressures. The duration of follow up was variable, and the data were the product of a number of different observers: nevertheless, it again appeared that a significant number of patients showed remarkable improvement in the blood pressure and the greater proportion of excellent results occurred in patients with grade 1, 2 and 4 hypertension.

After three years the result of surgical treatment of essential hypertension has again been evaluated medically with a review of 68 patients. All the patients had dorsolumbar sympathectomy for hypertension more than three years ago. Forty-seven of these patients are living; 16 of them with normal or near normal blood pressures and 8 with blood pressures entirely normal. Twenty-one of the 68 patients have died.

Thus during the period of observation in round figures 30 per cent have died,[2] 45 per cent have remained or have become hypertensive while 25 per cent have normal or near normal blood pressures, some of them (3 patients) five or more years after operation. In a carefully controlled group of 100 patients with hypertension on a general medical regimen plus the use of potassium thiocyanate, it had been found previously that, under the best conditions of medical treatment and follow-up, a sustained fall of the blood pressure to normal or near normal levels may be effected in 12 per cent.[3]

TABLE 2.—*Comparison of Clinical Evidences of Organic Change*

		Sex		Fundi					Heart Size and Function				Renal Function			
									No Change or Slight Enlargement	Moderate Enlargement	Decided Enlargement	Heart Failure	Normal	Impaired	Decided Impairment	
	No.	M.	F.	0	1	2	3	4								
The dead—"certainly unsuccessful"	21	14	7	1	3	7	4	6	15	4	2	6	8	9	4	7 over 40 years of age; spontaneous fall to near normal 1/10; fall to normal with sedative test 1/3; very high diastolic pressure 2/5
Those with B. P. 150/110 or lower—"the certainly successful"	16	2	14	0	6	7	0	3	15	1	0	1	12	4	0	3 over 40 years of age; spontaneous fall to near normal 1/3; fall to normal with sedative test 1/2; very high diastolic pressure 1/5
Those who remain or have again become hypertensive—"the doubtful"*	21	10	21	1	8	9	7	2	25	5	1	3	21	10	0	12 over 40 years of age; spontaneous fall to near normal 1/5; fall to normal with sedative test 1/2; very high diastolic pressure 1/5

* Class undetermined, 4.

II. *The Clinical Characteristics of Sixty-Nine Patients Treated Three or More Years Ago by Dorsolumbar Sympathectomy.*—In the evaluation of results in the surgically-treated patients with hypertension, those in the dead may be considered as certainly unsuccessful and those in the living patients with normal or near normal blood pressures after at least three years as successful.

Sex and age: Of the 21 patients who have died 7 were women, 14 men; 7 were 40 years of age or older. Of the 16 patients in whom results are regarded to date as successful, 14 are women, 2 are men; 3 are 40 years of age or older.

Clinical evidence of organic change: A comparison of clinical evidences of organic change in these two groups (table 2) is as follows: Of the unsuccessfully treated, the heart was normal in 6, showed minimal enlargement in 9, moderate enlargement in 4 and decided enlargement in 2; actual failure was present in 6 patients. Of the 16 certain successes, the heart was normal in 8, showed minimal enlargement in 7 and

2. In a control group of 646 hypertensive patients, the study of which was interrupted by the war, the mortality of the 50 per cent followed to date or death at that time (222 patients) was 30 per cent.

3. Fanson, E.; Kinsey, D., and Palmer, R. S.: Potassium Sulfocyanate Therapy in Essential Hypertension, New England J. Med. 229: 540 (Sept. 30) 1943.

moderate enlargement in 1 patient. One case was considered to show evidence of failure, and in another the presence of failure was questioned. Of the 21 failures, impairment of renal function was present in 13 and was well defined in 4 of these. Of the 16 successes, renal impairment was present in 4 and was questioned in 2 others. Of the 21 dead, the fundi were normal in 1, showed narrowing of the arterioles only in 3, arteriovenous compression and/or widening of the light reflex in 7; in addition to abnormal arterioles the fundi showed retinal exudate and hemorrhages in 4, and there was typical hypertensive neuroretinopathy with papilledema in 6. Of the 16 patients successfully treated by surgical means, 6 showed arteriolar spasm only, 7 showed arteriovenous compression and/or widening of the arteriolar light reflex, none showed retinal exudate or hemorrhage and 3 showed typical hypertensive neuroretinopathy with papilledema.

While this series is too small and the number of observations too limited to be definite statistically, a comparison of preoperative blood pressure levels and variations offers tentative guidance. In these two groups, the certain failures and the certain successes, the preoperative levels of the blood pressure in general were comparable. In a greater proportion of the successes the blood pressure approached normal levels spontaneously (5 as compared with 2 of the failures). Extremely high maximum levels of the diastolic pressure (150 or more) were somewhat more frequent (9 of 21) in the unsuccessfully treated as compared with the therapeutic successes (3 of 16). With the sedative test strictly normal blood pressures were recorded preoperatively in 7 of the 14 successfully treated patients who were so tested, in 4 of the 13 failures so tested. In the successes and the failures there appeared to be about the same proportion of the relatively high diastolic pattern with narrow pulse pressure (considered most favorable) and of the relatively lower diastolic pattern with wider pulse pressure (least favorable).

There are 31 patients who have remained or have become hypertensive in the three or more years (5 of them over five years) since dorsolumbar sympathectomy; hence any improvement may be regarded as doubtful or equivocal. Of these 21 are women and 10 are men; 12 are 40 years of age or older. Prior to operative intervention the heart was normal in size in 11, showed prominence in the region of the left ventricle in 14, moderate enlargement in 5 and decided enlargement in 1. Actual failure of the heart was present in 3. Renal function was impaired in 10 patients, questionably so in 3. The fundi were normal in 1 patient, showed narrowing of the arterioles only in 8, wide light reflex and/or arteriovenous compression in 9, exudate and hemorrhages in 7 and typical neuroretinitis with papilledema in 2. Classification of the fundi was undetermined in 4 instances.

In general the blood pressure levels were comparable to those referred to as certain successes and certain failures. In this doubtful group spontaneous fall of the blood pressure to normal or near normal levels occurred in about one third of the patients, proportionately the same as among the successfully treated. With the sedative test the blood pressure of nearly half of those tested (10 of 22) fell to within normal limits, as in the successful group. Maximum diastolic pressures were decidedly high (150 or more) in about a third (10 of 31), which was proportionately more than among the successes and less than among the certainly unsuccessful. The most favorable blood pressure pattern (relatively high diastolic with smaller pulse pressure) was found more commonly in this doubtful group than in either successes or failures, and the least favorable pattern was less common in this group than in either of the other two.

Improvement in the electrocardiogram subsequent to sympathectomy has been reported.[4] Of these 68 patients there were 29 who had adequate postoperative follow-up electrocardiograms. Changes were slight and of doubtful significance in 4 patients. In 8 there was evidence of improvement. There was no change in 5, and the electrocardiograms were worse in 12. The significantly improved electrocardiograms occurred in 5 patients whose blood pressures are normal or near normal and in 3 of those who are again hypertensive. Electrocardiograms were worse in 4 of those whose blood pressures are normal or near normal and in 6 of those who are again hypertensive. The size of the heart, as judged by 7 foot (231 cm.) roentgenologic study, may become less after surgical operation. Such postoperative study has been done in 7 of the patients whose blood pressures are normal or near normal three or more years after operation. In 3 of these patients the shadow of the heart is considered smaller, and in 4 there has been no change. Of 13 patients who remain or again have become hypertensive in whom roentgenologic follow-up of the size of the heart has been done the shadow of the heart is smaller in 3, larger in 2 and shows no change in 8.

The grade of hypertension benefited is indicated by the fact that 75 per cent of the certainly successful patients were those with grade 1 or 2 hypertension, but among the successes was 1 patient designated grade 3 because she was considered to have actual heart failure. The most important observation is that 3 patients with malignant hypertension are now known to have normal or near normal blood pressures, 1 for over three years, the other 2 for slightly less than and slightly over five years, respectively. None of these 3 had any evidence of renal impairment by qualitative tests; none had any evidence of actual heart failure; only 1 showed slight cardiac enlargement. There are 2 patients with malignant hypertension in the "doubtful" group because they are still hypertensive. They are alive and working, 1 over three years and the other nearly five years after operation; they undoubtedly have had their lives prolonged and have been afforded a considerable respite from their disease. One had no cardiac or renal impairment; the other had questionable renal impairment. All 5 patients with malignant hypertension were seen and operated on very early in the malignant phase. Of the 6 patients with malignant hypertension who have died, 3 had impaired renal function, 1 of them to a moderately severe extent, and the other 3 had both renal and cardiac failure.

III. *Summary of Three to Five Year Follow Up of Patients with Essential Hypertension Treated by Dorsolumbar Sympathectomy.*—From a review of these patients (21 dead, and therefore failures; 16 with normal or near normal pressures three or more years after dorsolumbar sympathectomy, and therefore successes; 31 with hypertension three or more years after operation, and therefore doubtful or equivocal) it would seem

4. Bridges, W. C.; Johnson, A. L.; Smithwick, R. H., and White, P. D.: Electrocardiography in Hypertension (Study of Patients Subjected to Lumbodorsal Splanchnicectomy), J. A. M. A. 131:1476 (Aug. 31) 1946.

that there are no positive tests or categories by which success or failure may be predicted accurately in an individual patient. In general it probably is true that the younger the patient (preferably under age 40) and the less the evidence of organic change the better the chance of an excellent result. The chances of women appear to be better, probably because the disease in general is more benign in women. The pattern of the blood pressures in these patients seems to have made little difference except that extremely high diastolic pressures are associated with more pronounced organic changes.[5] A spontaneous fall of the blood pressure to near normal while at rest in bed evidently is favorable but may occur in those whose blood pressure ultimately will be uninfluenced by operative intervention. With the sedative test a fall to normal is found less frequently in those who may be expected to die of their disease but about as often in those who remain or again become hypertensive as in those impressively benefited in respect to their blood pressure levels. Finally, there is a diminishing return of maintained normal or near normal blood pressures the longer one follows these patients. At first two thirds had blood pressures normal or near normal; later the figure was 50 per cent, then 40 per cent and now 25 per cent in patients followed three years or longer. At the present time, of 72 additional patients being followed for varying periods less than three years after operation, 24 (exactly one third) have blood pressures of 150 systolic and 110 diastolic or less. However, the comparison of 49 patients treated by dorsolumbar sympathectomy with 43 closely matched patients on a medical regimen showed that surgical treatment was definitely more effective in lowering the blood pressure, even if only temporarily; this was especially notable in the mild grade 1, moderate grade 2 and in malignant, or grade 4, hypertension but not too impressive in late benign, or grade 3, hypertension. Also, the 25 per cent sustained lowering of the blood pressure to normal or near normal levels by dorsolumbar sympathectomy is at least twice as good as the results obtained by a medical regimen plus the use of potassium thiocyanate in 100 cases.

IV. *Physiologic Effects, Disabilities and Dangers of Dorsolumbar Sympathectomy.*—It remains to inquire into the physiologic effects, the disabilities and the dangers of dorsolumbar sympathectomy. These may be the deciding factors in prescribing or withholding this procedure in patients with hypertension.

Immediately after the operation, especially after both sides are done, there is a profound and sustained fall in blood pressure which usually requires elevation of the foot of the bed and the administration of parenteral fluids including blood and of neo-synephrine hydrochloride intravenously. Recovery from this initial severe hypotension takes place in two to five days, but the hypotension may persist longer. Thereafter, sitting upright or standing may cause prompt disappearance of the blood pressure in the arm, an exceedingly rapid pulse, breathlessness, decided blanching, often coldness of the upper extremities and unconsciousness; in short, orthostatic hypotension with vasomotor compensatory adjustments. A tight elastic abdominal binder and tight elastic bandages on the legs will ameliorate or prevent these changes, especially if there is accompanying muscular activity (walking). These signs become somewhat less pronounced in the course of a day with periodic assumption of the upright position, and progressively less in the course of one to two months but may be recognized in some cases as long as two to three years after operative intervention. Tachycardia, breathlessness and a lightheaded feeling often are noted months or years later, when the subject has climbed a flight of stairs and pauses. The dilated minute vessels, one may suppose, add to the reservoir available for pooling of the blood. This is similar to the faintness of athletes on standing after a foot race. In the earlier period after surgical intervention the patients while sitting in a chair, reading or feeding themselves (minimal muscular activity in the lower half of the body) frequently have a white, gray or sallow pallor and lack tone in the facial muscles and eyelids; at times they have a slight clouding or retardation of mentation, tachycardia and breathlessness and coldness of upper extremities. These symptoms and signs are immediately relieved by the recumbent position. The dyspnea and tachycardia immediately on standing may be reduced by walking. The picture is that of a normal person suffering from "too many G's," or an uncompensated or incompletely compensated effect of gravity on the blood.

There are wide individual variations, but tolerance of the upright posture is developed the longer this posture is maintained. To raise the head of the bed during the hours of sleep reduces the intolerance noted more especially on rising in the morning. Most patients, though not all, can do without leg bandages in a few weeks and without an abdominal binder in two or three months. As noted previously, in the majority of this series (75 per cent), the blood pressure returns to hypertensive levels when the patient is followed three years or more, but in many instances there is a relative postural hypotension of some degree, an exceptional finding preoperatively. The less definite and persistent the hypotensive effect, the shorter is the period of convalescence and rehabilitation. It is concluded that a major effect of dorsolumbar sympathectomy in the majority of patients is pooling of the blood mass by gravity in the lower portions of the body. It is submitted that the objective signs of reduced strain clinically, in the electrocardiogram and in roentgenograms of the heart, may be related in part to pooling of the blood in dependent minute vessels with a diminished venous return during the two thirds of the day when the subjects are in the upright position. That the effect of the surgical operation is not primarily on the kidney is suggested by one observation. In a previously nephrectomized patient dorsolumbar sympathectomy on the side of the remaining kidney did not produce the characteristic relative postural hypotension or significantly modify the hypertension, but a noticeable lowering of the blood pressure occurred when the operation was performed on the other side three months later.

However, mechanical pooling of the blood mass by gravity may not be the only effect of dorsolumbar sympathectomy. Probably there is also an extensive reduction of vasomotor tone because: (1) there is an undoubted persistent and significant general reduction of the blood pressure level in a fourth of the patients; (2) this is noted most clearly and most frequently in those patients whose disease is considered on clinical grounds to have the largest vasospastic component

5. In 211 cases of grade 1 hypertension the maximum diastolic pressure was never over 140 in 88 per cent. In 435 cases of grades 2, 3 and 4 the maximum diastolic pressures were more than 140 in well over 50 per cent. In general the same is true of extremely high systolic pressures. The maximum systolic pressures were over 220 in only 4 per cent of grade 1 but in nearly two-thirds of cases graded 2, 3 and 4. In short, as common sense dictates: the higher the pressure, the worse the case.

(grades 1, 2 and 4). Many of the patients show an improvement in the general level of the blood pressure, though not to normal or near normal levels (including all degrees of persistent improvement, perhaps 60 per cent). Infrequently does one see a patient who is apparently almost purely vasospastic. One such entered the hospital five years ago with a history of progressive loss of vision of five weeks' duration; he was found to have slight papilledema and a decidedly high blood pressure. On rest in bed his blood pressure, however, was at times normal. No intracranial lesion could be localized. He was sent out for observation in the outpatient department. His blood pressure again was persistently high; his papilledema persisted, and his vision grew worse. He again entered the hospital, and, in spite of the fact that a postural and cold test was strictly normal and there was no abnormal response to cold, he was sympathectomized. His blood pressure has been normal or near normal ever since. His vision is normal. Recently he has shown early partial auriculoventricular block in the electrocardiogram.

Those patients in this series who have been in frank congestive failure or who have had maximal renal impairment have died (6) or have continued in failure (3) with 1 exception. It has been found that heart failure and renal failure may advance in spite of an appreciable degree of relative postural hypotension and that coronary thrombosis, cerebral accidents, hypertensive crises and pronounced pressor responses (especially to mental stress) may occur subsequent to operative intervention. Nevertheless, there are certain patients with some loss of cardiac reserve who may show additional signs of failure while awaiting operation or between the two stages but who show remarkable clearing of all signs of failure (tachycardia, rales at the base of the lung, alternation and gallop rhythm) and no longer require digitalis after the second stage operation when the upright position is assumed during most of the day. Also it appears that there are some patients in frank heart failure prior to the operation, though they have not been encountered in this experience, who have been relieved completely of congestive heart failure by dorsolumbar sympathectomy for considerable periods of time.[6]

Complications of the surgical procedure are extrapleural fluid (relatively common), basal atelectasis (fairly common) and pneumothorax (infrequent). These conditions are usually dealt with easily. Postoperative pain in the back and neuritis are common, sometimes persistent, and require the use of salicylates or codeine or meperidine (Demerol) hydrochloride, hot fomentations and counterirritants. Backache or flank pain usually lasts a week or so to two months, not infrequently longer, and may be annoying for a year. For the operation, six to ten weeks' hospitalization is required, another six weeks to two months of convalescence and nine months to a year to feel perfectly well. The expense in discomfort, time and money (though not in risk to life) is comparable to having a coronary thrombosis. The relative postural hypotension with compensatory phenomena (tachycardia, breathlessness and possibly general vasoconstriction) may persist for months and may be disabling. One of the certain successes had the Raynaud's phenomenon of the feet relieved after operation but Raynaud's disease developed in the hands. Another patient, aged 28 years when operated on, who survived the operation five years with a much improved blood pressure before finally dying of a cerebral thrombosis, had had rather diffuse mottling of the skin of the extremities and slight Raynaud's phenomenon of the hands postoperatively. Within two months after surgical operation the Raynaud's disease of the hands was worse, and in three months early gangrene had appeared in one toe. The patient required bilateral upper dorsal sympathectomy and an additional lumbar sympathectomy for Raynaud's disease. It is not suggested that Raynaud's disease was caused by the operation but that general vasoconstriction compensatory to the relative postural hypotension definitely aggravated a preexisting tendency.

Other complications are indigestion and distention possibly due to vagal overactivity and aggravation or precipitation of gastritis or peptic ulcer with hemorrhage. However, the pathway of pain from the upper part of the intestinal tract is interrupted, so that perforation of or bleeding from a peptic ulcer may occur without a clearcut clinical picture. A number of these patients have had pyelonephritis. Several, 2 especially, have seemed to respond well but have been plagued by recurrent active pyelonephritis.

The effect on libido and potency in men is difficult to evaluate. Except as they are affected nonspecifically by hospitalization, discomfort and medication, dorsolumbar sympathectomy in itself probably does not affect libido and potency. Ejaculation, however, is stopped as a rule by removal of the first and second lumbar ganglions on both sides, but sterilization does not necessarily result. Precise data on this point by sperm counts are being sought.

The risk of the operation at the present time is presumably 2 per cent or less. Of the 21 deaths in this series, 3 may be considered operative deaths. In the beginning the procedure was offered to some patients in an extremely serious condition, especially to some with advanced renal impairment (4) who it is now known could not possibly have been benefited. In addition to the 3 operative deaths, 3 patients died of congestive heart failure, 4 of cerebral accidents, 2 of uremia and 9 of a cause unknown, presumably of their disease.

For whom should sympathectomy positively be prescribed? The one condition in which dorsolumbar sympathectomy not only is effective but also is the only hope of palliation is hypertension of pronounced degree especially with a decidedly high diastolic pressure and papilledema, namely grade 4, or malignant, hypertension, if renal or cardiac impairment is not severe and, as a rule, if frank heart failure is not present. To whom may sympathectomy be offered? Sympathectomy may be offered to those patients in whom the vasomotor element is most pronounced as evidenced by spontaneous variation, especially grade 1 hypertension, and to others with no more than slight renal impairment and without frank heart failure, grade 2. Operation may be offered especially if interval observations show that the actual levels of the blood pressure are growing worse, since in 226 patients with late grade 3 hypertension at least 19 per cent appeared to have advanced to this stage directly from mild grade 1 hypertension. The percentage may actually be higher, because it was impossible to know about the earlier stages in 23 per cent of the cases (in 24 per cent the

6. White, P. D.: Personal communication to the author.

hypertension appeared to have started at middle age with cerebral coronary or renal arteriolar disease, in 10 per cent it appeared to be related to precocious irreversible arterial and arteriolar sclerosis in young adults; 17 per cent of patients were graded 3 because of vascular accidents, the hypertension being of the senile wide pulse pressure sort and probably incidental). In general younger women seem to be especially favorable candidates for surgical intervention, but there are a few women at or just after the menopause in whom there develops a severe vasospastic state with hypertensive crises who may be much helped. Hypertension coming on in middle life in men, especially if brought to light by clinical evidence of arterial or arteriolar disease in the brain, the heart or the kidneys, does not seem as yet to be so certainly benefited by operative intervention. The progress of the disease may be delayed by the relative postural hypotension produced, but the diffuse arteriolar disease is not helped. Decision in regard to surgical treatment may result from balancing the prognosis against the expenditure in time and discomfort and the degree of disability produced.

The surgical colleagues of the present hypertension research committee[7] of the Massachusetts General Hospital are employing different technics in an effort to reduce hospitalization while obtaining maximum benefits. For instance, one stage bilateral dorsal sympathectomy, from the third to the twelfth dorsal ganglions inclusive, has resulted in satisfactory relative postural hypotension and decided immediate improvement in a severely ill patient with malignant hypertension. A one stage bilateral dorsolumbar sympathectomy from the ninth dorsal to the first lumbar ganglions inclusive has been done. Finally certain patients with grade 1 vasospastic hypertension may well be offered one stage dorsal sympathectomy, which previously was found effective in some, which involves a shorter hospitalization and possibly less attendant disability and which may bring as much symptomatic relief. Lumbar sympathectomy may be added when as and if deemed desirable. For instance, 3 women are now under observation who had dorsal sympathectomies for early vasospastic hypertension ten or more years ago (2 in their twenties, 1 aged 33). One of these has had a strictly normal blood pressure; 1 has only a slightly elevated diastolic pressure; the third is definitely hypertensive but not severely so. Another had a dorsal sympathectomy for grade 2 hypertension at age 42, nine years ago. She is moderately hypertensive but works regularly as a nurse. A fifth patient operated on ten years ago by dorsal sympathectomy for a grade 1 menopausal hypertension at age 55 now has a decidedly high blood pressure and intermittent claudication, for which she had additional lumbar sympathectomies two years ago; but since the first operation she has been free from headache, as have all the others.

SUMMARY

A major effect of dorsolumbar sympathectomy in essential hypertension results from the relative postural hypotension, pooling of the blood in dependent parts and presumed decrease in venous return.

The duration of this effect varies widely, lasting from months to years, and accounts for much, if not the major part, of both the favorable effect on the disease and the considerable disability associated with the operation.

Compensatory vasomotor effects are orthostatic tachycardia and breathlessness, faintness, coldness of the hands (sometimes with the appearance of Raynaud's phenomenon), and infrequently the serious exacerbation of preexisting Raynaud's phenomenon so that additional operative intervention is required. The last mentioned is interpreted as compensatory vasoconstriction which seemingly does not involve (or involves less) the cerebral circulation as judged by relief of headache and improvement in eye grounds.

The orthostatic compensatory vasomotor effects are reduced and progressively minimized by elastic bandages on the legs, by an elastic abdominal binder and by time (presumably the functional development of peripheral vasoconstrictor centers and/or regeneration of the extirpated vasoconstrictor pathways). There is an improved tolerance in the course of each day from rising until retiring. This daily improved tolerance is cumulative. In addition to the relative postural hypotension a general reduction in the blood pressure level and presumably in the total vasomotor tone frequently is obtained.

When the favorable effect of operative intervention is critically evaluated (persistent reduction of the blood pressure to 150 systolic and 110 diastolic or below in all positions), it is found that in the present series there has been a diminishing return of favorable results the longer the patients are followed, nearly 70 per cent early in this experience, declining to 25 per cent when patients are followed three to five years or more. But this effect has been obtained twice as frequently in this series by surgical means as by a careful medical regimen and was obtained in patients with malignant hypertension whose blood pressures were unaffected by medical management.

In this series the patients with the most pronounced vasospastic elements were likely to receive the greatest benefit (grade 1 early variable and grade 4 malignant). Some patients with moderate benign hypertension, grade 2, without frank cardiac failure and without serious renal impairment were benefited. The patients with typical late benign hypertension, grade 3, with clinical evidence of irreversible diffuse arteriolar disease in brain, heart or kidneys were not benefited conspicuously; often they were plagued by a long disability to no purpose.

From this experience sympathectomy is regarded as the treatment of choice, at this time, for malignant hypertension and may be offered to patients with early or moderate vasospastic hypertension who have no clinical evidence of advanced, irreversible diffuse arteriolar disease. The factors of age and sex and the variations of blood pressure are discussed. To grade the degree of hypertension and to estimate the prognosis, interval observations over a period of time are necessary in almost all patients except those with malignant hypertension.

Prescription of operation for the patient with hypertension involves evaluation of the hypertension and attendant organic changes, the social and economic status and the personality of the patient and the objective of treatment (symptomatic relief, reduction of the blood pressure or halting the progress of the disease). Final judgment may depend on balancing the present status and estimated future of the patient with induced discomfort and disability.

7. Drs. Robert R. Linton, Francis D. Moore, F. A. Simeone, W. H. Sweet, Claude Welch and James C. White.

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GENERAL PRACTICE IN A LARGE HOSPITAL

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Since the establishment of the Section on General Practice in the American Medical Association in June 1946 many hospitals throughout the country have formed, or are in the process of forming, general practice sections. Mount Carmel Mercy Hospital, Detroit, has had such a section for eight years. It is felt that a description of the workings of this section, as well as an outline of the setup, might be of general interest.

When the regular active staff was organized, it was divided into four sections:

1. Medicine with its specialties.
2. Surgery with its specialties.
3. Obstetrics and gynecology.
4. General practice.

The chairman of each section, including general practice, conducts all meetings within his section. At the regular monthly section meetings there is a discussion of all deaths for the preceding month and of cases of unusual interest. Usually the chairman plans to bring out certain educational points or builds a scientific program around one or more of the cases.

In the general practice section the deaths are discussed in the open meeting, and the general practitioner whose case is under discussion is judged by other members of the section (also general practitioners). His errors, if any, may be pointed out to him. The chief of staff of the hospital may attend these meetings but does not participate unless asked to do so. In short, the general practice section does its own policing.

At all general practice section meetings the need of recognizing one's limitations is stressed, as is the need of postgraduate study. Men are asked about postgraduate work at frequent intervals, and men are asked to report, on their return, in the open meeting such work as they have done. Also they are reminded to complete their hospital records in a satisfactory manner and to keep their progress notes up to date. Consultation by members of the specialty staffs is urged in all major cases and in cases in which the outcome is in doubt.

The educational program is presented in the accompanying tabulation.

All members of the staff are required to have a 75 per cent attendance (except in case of prolonged illness) at all staff meetings, section meetings, clinical-pathologic conferences and educational program committee meetings. Attendance at the interns' meetings and journal club meetings is optional but well worth while, and many men attend voluntarily. Occasionally a member of the general practice group is asked to be a discusser at one of the interns' meetings or at a clinical-pathologic conference. Men who do not show an interest in the program may be reduced to a courtesy status or dropped by action of the executive committee.

The general practice section participates in the educational program committee conferences, taking an equal share with medicine, surgery and obstetrics and gynecology. Actually this means putting on ten meetings a year for the entire staff of the hospital. The chief of the division of general practice is responsible for this program. He makes plans for the whole year, securing speakers from outside the hospital staff (Wayne University or University of Michigan) for some of the meetings. For other meetings he may ask a member of one of the specialty staffs of the hospital to speak on a subject of interest to the general practice section. At one or sometimes two of the meetings the program may be put on by the general practice section itself. This has usually been in the form of a round table discussion. The chief of general practice conducts these meetings personally, introducing all the speakers.

The chairman and the secretary of the general practice section are elected at the September section meeting by popular vote of the members of the section. They hold office for one year. The chief of the division of general practice is an appointive office. The superintendent of the hospital makes the appointment on recommendation of the executive committee. The appointment is for one year but has at times been extended to two years. The chairman of the section is usually the man chosen for chief of the division, but not necessarily so. He may be any member of the general practice section.

The chief of the division of general practice is a member of the executive committee. He has an equal voice with the other department heads in the determination of hospital policies. He is the liaison officer between the general practitioner and the specialty groups. He makes recommendations to the executive committee on all men applying for staff appointments in the general practice section and is consulted in all matters of policy within the section. He makes recommendations for advancement of the members within the section according to the following outline:

Educational Program

	First Wednesday	Second Wednesday	Third Wednesday	Fourth Wednesday
8 to 9 a. m.	Interns' meeting	General staff meeting	Interns' meeting	Interns' meeting
9 to 10	Educational program committee conference	Clinical-pathologic conference	Educational program committee conference	Educational program committee conference
10 to 11	Surgical section meeting	Obstetrics and gynecology section meeting	Medical section meeting	General practice section meeting
11 to 12	Executive committee meeting	Medical journal club	Surgical journal club	Obstetrics and gynecology journal club

Attending: (A) Twenty years in practice. (B) Postgraduate work and interest shown in self improvement. (C) Professional ability and qualifications. (D) Attendance at meetings and interest shown in hospital work.

Associate attending: Fifteen years in practice plus foregoing.

Junior attending: Ten years in practice plus foregoing.

Assistant attending: Three or more years in practice plus foregoing.

Voluntary assistant: One year internship.

Members of the general practice section may hold dual staff appointments. They may receive appointments on the specialty staffs with a rating up to junior attending. Such an appointment usually comes through the chief of the division of general practice after consultation with the chief of the specialty division and is given in recognition of unusual ability and postgraduate work in a chosen field. It must, of course, have the approval of the executive committee. A man so appointed retains his membership in the general practice section. His activities in the specialty section are governed by the rules and regulations of that section.

Mount Carmel Mercy Hospital was opened on Jan. 16, 1939 as a 300 bed hospital. It now has 450

beds and 125 bassinets, with an average daily occupancy of 460. In the years 1939 to 1946 there were over 160,000 admissions. There have been over 25,000 obstetric deliveries in the hospital in eight years and over 57,000 surgical operations.

It is not possible to determine the exact role of the general practitioner in these statistics. The combined mortality rate of the general practitioners and the specialists compares favorably with that of hospitals of similar size throughout the country. Because of the fact that a large proportion of the general practitioner's surgery is minor or uncomplicated major surgery, his mortality rates are lower than that of any of the other divisions of the staff.

In obstetrics the general practitioner has been limited only by his ability, but no member of the general practice section attempts any major obstetric procedure without calling in a member of the obstetric staff. Often in these cases, if the particular general practitioner is qualified by training and experience to handle the procedure, the specialist merely stands by to advise or take over if the necessity arises. The general practitioner always bears in mind that the best interests of his patient are served when he stays within the limits of his ability.

No really seriously ill patient under the care of a general practitioner in this hospital is denied consultation by a senior member of one of the specialty staffs. Such consultation is furnished without charge if the patient is unable to pay.

The results of the educational program are apparent to the general practitioner himself. He feels that he is a better doctor than he was before he became a member of the staff. His education never ends, and he knows it. He must attend the scientific meetings and do outside postgraduate work to maintain his standing. But, best of all, he knows that he plays a part, however small, in the educational program and in the management of the affairs of his hospital.

Nowhere is there a finer spirit of understanding and cooperation between the general practitioner and the specialist. Many of the specialists have come to regard the general practitioner with new respect, and all the specialists have been amazed at some time or other to find the general practitioner abreast with the latest developments in the specialty fields. There isn't a specialist on the staff who, after eight years, regards the establishment of a general practice section a mistake.

Every hospital should be a teaching center, not only for residents and interns, but for staff members as well. There is no better way to reach the general practitioner for educational purposes than through the hospital in which he is permitted to care for his patients.

SUMMARY

The general practice section at Mount Carmel Mercy Hospital permits the general practitioner to work in a recognized hospital where his activities may be supervised if necessary, thereby acting in the best interests of the patient. It permits him to practice with pride and self respect. The general practice section stimulates interest in self improvement. It acts as a stepping stone for advancement to certain qualified men who have not had opportunities for long residencies.

All these things are made possible by the foresight of the men who drew up the original constitution and by-laws, the understanding cooperation of the Sisters of Mercy, the governing board of the hospital, the superintendent of the hospital and the specialists on the staff.

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INTRATHECAL PENICILLIN

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Penicillin has an irritative action on nerve tissue and may produce convulsions when applied in sufficient concentration to the cerebral cortex. Intrathecal penicillin has been used in single doses ranging from 5,000 to 100,000 units for the treatment of various inflammatory diseases of the meninges. As well as can be determined from a review of the literature, no larger single dose than 100,000 units has been used intrathecally, and no convulsions have been produced with such doses. The purpose of this article is to report a case of meningococcic meningitis in which the patient received (by error) a single massive dose of penicillin intrathecally and recovered after a series of generalized convulsions.

REPORT OF A CASE

History and Examination.—A white woman aged 27, married, four months pregnant, was admitted to Flushing Hospital in a comatose state. The past history was noncontributory except that she had had a slight "head cold."

On the day of admission, when her husband left for work in the morning she was apparently well. When he returned from work at 6 p. m. the patient complained of severe headache and of pain and stiffness in the neck. These symptoms continued, becoming progressively worse, and a few hours later she lapsed into semicoma and was admitted to the hospital in that state.

The essential physical observations on admission to the hospital were as follows: The temperature was 101 F. The patient was semicomatose, irrational and thrashing violently in the bed. The pharynx was red. Dried blood clots and mucopurulent material were present in both nostrils. The left ear drum was covered with fresh blood, but no perforation could be found. There was pronounced nuchal rigidity, and a bilateral Brudzinski sign was elicited. A positive great toe reflex was obtained on the right side.

Laboratory Data and Clinical Course.—Examination of the blood revealed 17,400 white blood cells with 90 per cent polymorphonuclears and 10 per cent lymphocytes. Urinalysis disclosed 1 plus albumin, and there was a slight trace of acetone. On spinal tap the fluid was cloudy, under increased pressure and contained 1,000 white blood cells per cubic centimeter, of which 98 per cent were polymorphonuclear cells. (The cell count probably represented a low value, because there were large pus clumps present in the fluid.) Smear of the spinal fluid revealed an occasional gram-negative intracellular diplococcus. Culture later revealed that the organism was a meningococcus.

The immediate treatment ordered was as follows: sodium sulfadiazine 4 Gm. intravenously, penicillin 40,000 units every three hours intramuscularly and 50,000 units penicillin in 10 cc. isotonic solution of sodium chloride intrathecally. The last medicament was prepared by the night supervisor and given at approximately midnight.

At 1 a. m. it was noted that the patient had twitching of the face and body and that the slightest noise in the ward or movement of the nurses caused a generalized twitching. At 5 a. m., five hours after the single massive dose of intrathecal penicillin, the patient had the first generalized clonic convulsion, which lasted thirty seconds. From 5 to 8 a. m. there were ten such convulsions. During this period a total of 6 grains (0.39 Gm.) of sodium phenobarbital and 4 grains (0.26 Gm.) of sodium amytal were given. After the third convulsion a large amount of mucus was suctioned from the throat. After the fifth convulsion the patient became incontinent of urine, and there was a slight amount of bloody vaginal show.

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A word of explanation is indicated at this point: The day following admission, when the central supply office made their routine check of penicillin 450,000 units could not be accounted for. The night supervisor was contacted, and it was then discovered that she had prepared 500,000 units for the intrathecal injection and that that amount had been given. This was approximately fourteen hours after the intrathecal injection and six hours after the last convulsion.

A second spinal puncture was immediately ordered and showed a cloudy greenish fluid under increased pressure. Twenty-five cubic centimeters of fluid was withdrawn; the cell count was 2,100 with 98 per cent polymorphonuclear cells. Subsequent to this the patient began to show signs of improvement. Thirty-six hours after admission the temperature was 100 F., and thereafter it was normal.

After the series of convulsions the course was uneventful and recovery was rapid. The patient did not abort.

COMMENT

It was thought in the early stages of penicillin therapy applied to the nervous system that the convulsive manifestations might be due to impurities in the commercial penicillin. The work of Walker,[1] Johnson[2] and Kollros[3] seemed to show that the penicillin itself was the responsible factor. These investigators demonstrated that the intracortical injection of penicillin in man may give rise to electroencephalographic and clinical manifestations of seizures. It has been observed by Neymann[4] that the intraventricular and intracisternal injection of penicillin in man may induce a status epilepticus with a fatal outcome.

There appears to be little doubt that the dose of penicillin given intrathecally was the cause of the convulsions. Twitching and exaggerated reaction to noise and movements began one hour after the injection of intrathecal penicillin, and the first convulsion occurred four hours later. Furthermore, in our experience generalized clonic convulsions in meningococcic meningitis are exceedingly rare. Osler[5] has stated that except in early childhood convulsions are not common. Similar statements are made by Wilson[6] and Alpers.[7] It is perhaps significant that the convulsions ceased six hours before the second spinal tap removing the penicillin. One might speculate that the irritative phase of penicillin on the nervous system continues for a certain period and then ceases, or perhaps the dilution factor was sufficient after a time to lower the concentration of the antibiotic in the spinal fluid.

Reports of convulsions from the intrathecal use of penicillin are infrequent. The reason may be the amount used, since the recommended dose of 10,000 to 30,000 units intrathecally produces a concentration in the subarachnoid space around the cortex far below the convulsive threshold. However, it may be desirable to use larger single doses intrathecally in severe cases of meningococcic meningitis or, more especially, in the other types of pyogenic meningitis. We do not wish to give the impression that we are advocating single doses of 500,000 units of penicillin intrathecally, but much larger amounts than those considered safe at present can probably be given without convulsive seizures or other ill effects. Single doses of 100,000 units intrathecally have been used without convulsive tendencies.[8] The development of resistance to penicillin by pyogenic bacteria is known to be produced by the use of small (sublethal) doses. Therefore large initial doses given intrathecally may be advisable in some of the pyogenic meningitides. The rapid improvement and recovery of our patient suggested a beneficial therapeutic effect, even considering the fact that sulfadiazine also was administered.

While the recommended intrathecal dose of penicillin is from 10,000 to 30,000 units[9] for a single injection, recent reports seem to favor larger amounts, especially in the treatment of pneumococcic meningitis, in which the mortality is still high. Reitz[10] reported 8 cases of meningitis, 2 pneumococcic and 6 meningococcic, with no mortality. The 2 patients with pneumococcic meningitis and the critically ill patients with meningococcic meningitis received intrathecal penicillin, single doses of 100,000 units every twelve hours for three doses. One patient received two injections of 100,000 units each five hours apart and a third injection of the same amount the next day. No untoward reactions were noted. It is interesting to read the various opinions in the literature as to the dose for intrathecal use. The British investigators continue to use smaller amounts. Thus Jepson and Whitty,[11] in reporting 10 cases of pneumococcic meningitis with a mortality of 40 per cent from the meningitis, recommend "an immediate overwhelming intrathecal dose of penicillin" (10,000 to 20,000 units). Duthie and Cairns[12] stated that excessive dosage of 40,000 units and over at a single injection may produce fits or other severe cerebral reactions when injected into the ventricles or damage to the cauda equina or gumming of the subarachnoid space when injected by the lumbar route. Reports by investigators in this country do not substantiate these observations. We have used repeatedly 50,000 units for a single intrathecal injection in various types of meningitis without damage to the cauda equina or subarachnoid space. In the present case no residual damage to the cauda equina or other part of the nervous system was noted.

The question of pleocytosis produced by the use of intrathecal penicillin logically follows, and it also is a controversial subject. Rammelkamp and Keefer[13] reported headache, vomiting, increased intrathecal pressure and phagocytosis in the spinal fluid after the intrathecal injection of 10,000 units of penicillin in a normal subject. In probably the first case in which intrathecal penicillin was used Fleming[14] observed no clinical reaction, although there was evidence of some slight irritation by an increased emigration of polynuclear leukocytes. In a series of 12 cases of pneumo-

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7. Alpers, B. J.: Clinical Neurology, ed. 1, Philadelphia, F. A. Davis Company, 1945, p. 311.
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coccic meningitis with 1 death, Waring and Smith [15] noted few ill effects. Adult patients complained in several instances of headache and nausea following intrathecal injection, but the patients did not show definite pleocytosis. In our case headache and nausea could not be determined because of the patient's condition, but there was no vomiting. It is reasonable to state that a definite pleocytosis was not produced by the intrathecal dose of 500,000 units, since the first cell count probably would have been considerably higher if the large clumps had not been present. Whether an irritative pleocytosis was produced but counterbalanced by a rapid decrease in the inflammatory reaction as a result of the large dose of penicillin cannot be determined.

Since medical science is constantly striving for simpler methods in the treatment of all diseases, it is not unusual to desire the elimination of intrathecal therapy of meningitis; if this goal cannot be reached, a minimal number of intrathecal injections would be the next most desirable thing. Furthermore, repeated spinal punctures increase enormously the chance of introducing infection from without.[12] Although Rosenberg and Sylvester [16] reported that under some conditions, such as acute inflammatory lesions of the meninges, penicillin might diffuse into the cerebrospinal fluid following systemic administration alone, there is good clinical evidence that the amount of penicillin that reaches the spinal fluid in bacterial meningitis is probably insufficient to control the infection.[17] Cases of meningitis have been noted in which the patient did not improve until penicillin was given intrathecally, and other cases have been reported in which meningitis appeared during the course of the intramuscular or intravenous treatment of extrameningeal infection. In these cases, likewise, no improvement took place until intrathecal therapy was instituted.

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Tuberculosis Mortality in World War II.—Combined figures from the Office of the Surgeon General and the Veterans Administration, representing the tuberculosis mortality of the entire army group, including its discharged members, are now available. . . . This group, consisting of about 4 million men in 1942 and increasing to more than 11 million in 1945, had an average tuberculosis mortality of less than 4 per hundred thousand per year in 1942. The mortality increased to about 6 per hundred thousand per year in 1943 and to 10 in 1944. A slight rise was again evident in 1945, the last period for which figures are available, when the average mortality for members of the existing army and discharged men and women who had served in the Army from 1942 to 1945 increased to 12 per hundred thousand per year. During this time the gross mortality rate for males of corresponding age in the United States fluctuated slightly but remained fairly constant at about 52 per hundred thousand population per year. The phenomenon observed is of great epidemiologic importance. A group with a relatively low tuberculosis mortality rate at the start, but with a certain percentage of unrecognized cases in its midst, has shown a significant rise in its rate within a period of four years, at a time when the mortality rate of the population from which it was drawn has remained practically constant.—Long, Esmond R.: The Tuberculosis Experience of the U. S. Army in World War II, *Am. Rev. Tuberc.*, January 1947.

SYNTHETIC FOLIC ACID

The Effectiveness of a Conjugated Form in the Treatment of Tropical Sprue, Addisonian Pernicious Anemia and Nutritional Macrocytic Anemia

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Folic acid is the newest member of the vitamin B complex, and its therapeutic use in the treatment of pernicious anemia, nutritional macrocytic anemia and the macrocytic anemia of pellagra, pregnancy and sprue is bringing the fields of hematology and nutrition closer together. Folic acid occurs in nature in a free form and also as a part of various complexes. The following five substances have been isolated in crystalline form: (1) vitamin B^c; (2) Lactobacillus casei factor from liver; (3) L. casei factor from yeast; (4) another L. casei factor isolated from a fermentation residue, and (5) vitamin B_c conjugate.

Vitamin B_c, the L. casei factor from liver and the L. casei factor from yeast are identical with the synthetic product described by Angier and associates.[1] This compound is called pteroylglutamic acid and contains 1 molecule of glutamic acid. In contrast, the special L. casei factor isolated from the fermentation residue yields 3 molecules of glutamic acid. The vitamin B_c conjugate as reported by Pfiffner and his co-workers [2] yields 7 molecules of glutamic acid. If one may assume normal peptide linkages they can be written as shown in the accompanying illustration. These substances might well be designated respectively as pteroyldiglutamyl-glutamic acid (pteroyltriglutamic acid or fermentation L. casei factor) and pteroylhexaglutamyl-glutamic acid.

The studies on pteroylglutamic acid have been reviewed by Berry and Spies [3] and by Spies.[3a] Recently Spies and Stone have reported on the effect of pteroylhexaglutamyl-glutamic acid in treating addisonian pernicious anemia and nutritional macrocytic anemia in relapse.[4] Spies, working with a limited amount of the naturally occurring pteroyldiglutamyl-glutamic acid found it to be effective in treating addisonian pernicious anemia in relapse.[5] Suarez and his associates,[6]

University of Cincinnati Studies in Nutrition at the Hillman Hospital, Birmingham, Ala., and at the Calixto Garcia Hospital, Havana, Cuba. In cooperation with the Department of Clinical Pathology of the University of Havana (Professors D. Ramos and J. Bisbe).

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Valuable technical assistance was given by Miss Jane Davis, Mrs. Mary B. Koch, Mr. Tulio Martinez and Miss Flora Villate.

The synthetic pteroyltriglutamic acid used in this study was received from Dr. Y. SubbaRow of Lederle Laboratories, Inc.

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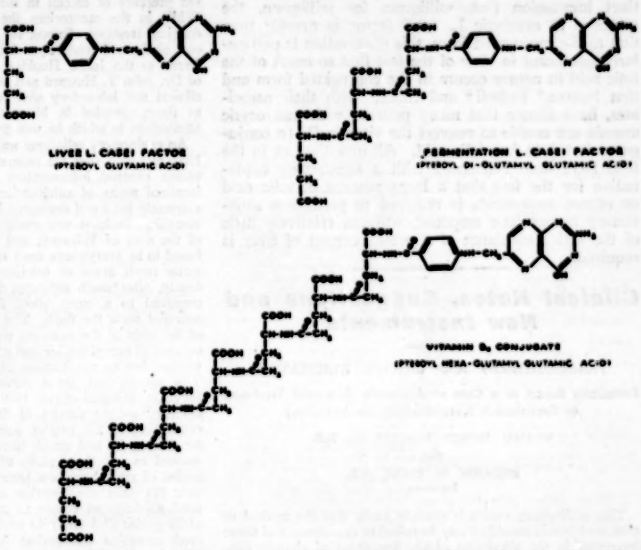
likewise working with a limited amount of the naturally occurring material, found it to be effective in treating a patient with tropical sprue.

The present report is concerned with a study on synthetic pteroyldiglutamyl-glutamic acid in the treatment of tropical sprue, addisonian pernicious anemia and nutritional macrocytic anemia in relapse. Methods of study were similar to those previously described.[7] The response to treatment is illustrated in the following case history.

REPORT OF A CASE

History and Examination.—M. G., a 55 year old Cuban man, was admitted to the Calixto Garcia Hospital on Nov. 21, 1946 complaining of extreme weakness and diarrhea. The onset of his illness was insidious. He said that he had been in poor health for a long time but could not state definitely for how long. Early in 1945 he began to lose weight and became progressively weaker. When he was admitted to the hospital in June 1945 his red blood cell count was 600,000. He was treated with extract of liver and given several transfusions of blood during the three months he was in the hospital. His blood values returned to normal, his appetite returned and he gained in weight. For six months after he was discharged from the hospital he felt perfectly well, although he received no treatment during this time. In February 1946 he suddenly began to have diarrhea consisting of from eight to ten semiliquid yellow stools a day. The bowel movements were preceded by cramping and pain in his intestines. Since he had no desire for food, and since food seemed to aggravate the diarrhea, he restricted his diet to liquid or soft foods such as milk, soup, cornmeal, rice and coffee. Occasionally he ate eggs and vegetables in small amounts. He became so weak he was unable to do any kind of work and was forced to stay in bed most of the time. His tongue became so sore that he frequently was unable to take any food but milk. He had cramping pains in his legs and a sensation of having sand in his eyes. Occasionally the diarrhea subsided for a few days and he felt better, but he continued to lose weight. By the time he came to the hospital eight months after the onset of the diarrhea, he had lost 30 pounds (13.6 Kg.).



Assuming normal peptide linkage in the conjugated forms of folic acid, these two formulas could be written as shown.

The physical examination on admission showed an emaciated man who did not seem to be in acute distress but appeared to be extremely weak and apathetic. His skin was inelastic and had a lemon yellow tinge. The tongue was slick, and the papillae along the margin and at the tip were enlarged and hyperemic. His abdomen was distended with gas. The neurologic examination revealed nothing contributory.

Laboratory Data on Admission.—Examination of the blood revealed: red blood cell count 1.88 million; white blood cell count 3,700; hemoglobin 8.0 Gm. (52 per cent), and color index 1.4. Bone marrow studies showed maturation arrest at the megaloblastic level. Repeated gastric analyses showed hypochlorhydria with free hydrochloric acid after histamine stimulation. Stool analyses revealed acid steatorrhea. Oral glucose tolerance tests disclosed a flat curve.

On the basis of these laboratory and clinical findings, a diagnosis of tropical sprue was made.

Treatment and Course.—Two days prior to admission, the diarrhea subsided and the patient was having only two or three bowel movements daily. It was decided to keep him in the hospital for study under controlled conditions prior to the initiation of specific therapy. During this time his diet contained no meat, meat products, poultry, fish, eggs, milk, green vegetables or fresh fruits. It consisted only of bread, cornmeal, rice, potatoes, root vegetables and coffee. Determinations of the red blood cell count, white blood cell count, hemoglobin and reticulocyte levels were made daily. After fifty-nine days the red blood cell count was 1.32 million; white blood cell count 3,600; hemoglobin 6.6 Gm. (43 per cent), and reticulocytes 1.0 per cent. During this period of time the diarrhea of the patient did not increase in severity; he ate a diet containing approximately 1,500 calories a day, and his weight remained essentially unchanged.

Beginning on his sixtieth hospital day he was given 10 mg. of synthetic pteroyldiglutamyl-glutamic acid daily intramuscularly for eight days. On the fifth day of therapy the reticulocytes began to rise and reached a peak of 14.8 per cent ten days after the initiation of therapy. Five days later his red blood cell count was 2.43 million and the hemoglobin level was 9.0 Gm. (58 per cent). Clinical improvement paralleled the hemopoietic response. His appetite increased when his reticulocytes began to rise, and he began eating approximately 3,000 calories daily. His strength and feeling of well-being increased, and he began to gain in weight.

A similar hemopoietic and clinical response followed the administration of synthetic pteroyldiglutamyl-glutamic acid to 1 patient with addisonian pernicious anemia and to 1 with nutritional macrocytic anemia, who were treated in the Jefferson Hospital, Birmingham, Ala.

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SUMMARY AND CONCLUSIONS

This communication reports the first patients with sprue, addisonian pernicious anemia and nutritional macrocytic anemia to whom synthetic pteroyldiglutamyl-glutamic acid, which is a conjugated form of folic acid, has been administered and found to be effective in producing a hematologic and clinical response. It must be kept in mind that there are many substances that may act similarly. This substance differs chemically from the L. casei factor (folic acid) in that it has 2 more molecules of glutamic acid and is not excreted so promptly in the urine of persons with macrocytic anemia as is the L. casei factor. Pteroyldiglutamyl-glutamic acid and the L. casei factor, if given in sufficient amounts, are capable of producing a hemopoietic remission. Although we gained the distinct impression that, milligram for milligram, the response to synthetic L. casei factor is greater than that to the conjugated form, this observation is particularly significant in view of the fact that so much of the folic acid in nature occurs in the conjugated form and that Suarez,[6] Bethell[8] and Spies,[4] with their associates, have shown that many patients with macrocytic anemia are unable to convert the vitamin B_c (a conjugated form) to free folic acid. All investigators in the field have been concerned with a satisfactory explanation for the fact that a large amount of folic acid or related compounds is required to produce a satisfactory hemopoietic response, whereas relatively little of the active substance of a potent extract of liver is required.

Clinical Notes, Suggestions and New Instruments

PANCREOLITHIASIS AND CHRONIC PANCREATITIS

Preliminary Report of a Case of Apparently Successful Treatment by Transthoracic Sympathectomy and Vagectomy

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This preliminary report is made in order that the method of treatment herein described may be called to the attention of those interested in the alleviation of the symptoms of chronic pancreatitis and pancreolithiasis. Up to the present all therapeutic methods employed, either medicinal or surgical, have been unsuccessful from the point of view of the relief of pain, which constitutes the essential disabling factor in this clinical syndrome. Various surgical procedures have been carried out for relief of this excruciating pain, and all have been essentially unsuccessful. These procedures consisted of partial or complete pancreatectomy, ligation of the pancreatic ducts and various operations on the biliary tract.

In the patient whose treatment forms the basis of this report, an unsuccessful result was obtained from a partial pancreatectomy, plus ligation of the duct of Wirsung, performed in 1939. After bilateral transthoracic vagectomy and sympathectomy performed in April 1946, the patient has been completely free of pain, has gained 60 pounds (27 Kg.) and has now returned to his former business, apparently asymptomatic. A complete report with illustrations and laboratory data will be published later. A brief résumé of the clinical history is as follows:

P. D., a white man aged 35, was first admitted to the Johns Hopkins Hospital Sept. 16, 1939, with the complaint of severe pain in the epigastrium which came on after meals, particularly in the afternoon and evening. This pain was accentuated by taking food. Because of the increased severity of the pain the patient sought relief by drinking whiskey, which seemed to alleviate his discomfort. Up to this time he had been an active intelligent business man, but he became addicted to alcohol, his daily consumption being between 2 and 3 quarts (1.9 and 2.8 liters) of whiskey, which interfered with his life socially and in a business way.

He was admitted to a sanatorium for the treatment of alcoholism, and during the routine examination it was found that he had severe diabetes mellitus and was strikingly emaciated because of the fact that ingestion of food caused him to have severe pains; he was thought to have in addition a psychopathic personality. Laboratory examination revealed that the level of sugar in the blood was constantly elevated above 200 mg. per hundred cubic centimeters, and that there was 4 plus sugar in his urine. Also, the roentgenograms of his abdomen revealed the presence of calculi in the head and tail of his pancreas. While in the sanatorium the patient had several attacks of delirium tremens. Except for being treated for his diabetes he was discharged relatively unimproved, whereupon he was transferred to the Johns Hopkins Hospital on the medical service of Dr. John T. Howard and later of Dr. Louis Hamman. The clinical and laboratory observations were essentially the same as those revealed in his previous examination in the local sanatorium to which he was primarily admitted.

An exploratory celiotomy was performed by W. F. R. Sept. 25, 1939, at which time the pancreas was found to be the site of a severe chronic inflammatory lesion associated with diffuse localized areas of calcification. The organ as a whole was extremely hard and decreased in size; it seemed to be definitely atrophic. Incision was made in it along the probable course of the duct of Wirsung, and the substance of the gland was found to be everywhere hard and gritty, due to scar tissue with many small areas of calcification. The pancreatic duct was finally, after much difficulty, isolated and found to be dilated proximal to a stone about 3 mm. in diameter, which was removed from the duct. The duct was ligated, and a portion of the body of the pancreas was removed. The patient had an uneventful convalescence and recovered from the operative intervention, but no amelioration of his signs or symptoms followed. The patient had seven successive admissions to the Johns Hopkins Hospital from 1939 to April 1946, when he was admitted on the service of Dr. Hamman. At this time the emaciation of the patient was extreme and his diabetes was far worse; he had drunk increasing amounts of whiskey, had smoked two to three packs of cigarets a day and had over a period of years become a pronounced morphine addict. At one time his daily consumption of morphine and Pantopon (the total alkaloids of opium as soluble hydrochlorides) amounted to 20 grains (1.3 Gm.) in twenty-four hours. Previous to the final operation the patient had several attacks of delirium tremens. In addition to previous laboratory findings his stools were now voluminous and fatty, suggesting decided pancreatic deficiency.

Transthoracic vagectomy and sympathectomy were performed on April 8, 1946, at which time the sympathetic trunk from the fifth thoracic to the second lumbar ganglion was removed transthoracically, including the greater, lesser and least splanchnic nerves and the celiac ganglion on the left side. The right and left vagus nerves were also resected above the diaphragm for a distance of 3 cm. Subsequent to this surgical procedure there was pronounced improvement in the clinical condition. The pain seemed to be less. On April 24 transthoracic sympathectomy on the right side was performed, the sympathetic trunk, again from the fifth thoracic to the second lumbar ganglion, including the greater and lesser splanchnic nerves and the celiac ganglion, were removed.

The patient had an uneventful convalescence, improved remarkably during his hospital stay and was discharged May 5 to return to his home to complete his convalescence.

A letter from Dr. R. H. Crawford of Rutherfordton, N. C., dated Feb. 26, 1947, stated: "I saw patient at the hospital yesterday, he is tremendously improved, is entirely free of pain—he has not taken any narcotics for the past six months." A complete report of Dr. Crawford's record will be incorporated in a more detailed description of the case in a later report.

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Suffice it to say that the patient has gained 60 pounds (27 Kg.), his personality has returned to normal, he is taking nothing alcoholic to drink and he has had no narcotics of any sort for six months. Photographs of him taken in 1940 and in 1947 show the most extraordinary physical improvement. These will be incorporated in a forthcoming article.

It is necessary for him at present to take 40 units of protamine zinc insulin and 10 units of regular insulin each day, and as a result of this his urine has remained free of sugar. On Feb. 25, 1947 the level of sugar in his blood was 250 mg. per hundred cubic centimeters. He takes two tablets of triple strength pancreatin after meals.

CONCLUSION

This patient would seem to present incontrovertible evidence that pain, the main disabling symptom of chronic pancreatitis and/or pancreolithiasis, can be alleviated by severance of the autonomic fibers supplying the pancreas. The rationale of the operation was: first, all or any afferent fibers from the pancreas would be cut if complete sympathectomy and vagectomy were performed; second, interruption of both the sympathetic and parasympathetic paths would be necessary because of their many and frequent anastomoses and was the only procedure which would insure interruption of such afferent paths; third, although the physiologic action of the autonomic systems of the pancreas in the human being is not completely known it may be assumed that the secretory function, as far as the external secretions are concerned, would probably be reduced as a result of the severance of the parasympathetic and sympathetic nerves leading to the pancreas. The origin of pain would seem to be due to the secretion of pancreatic juices into the ducts blocked by the cicatrization and calcification of the small tributaries of the larger ducts of Wirsung, these secretions thereby producing distention of the obstructed channels or ducts. Secretion of the denervated pancreas probably is decidedly reduced after severance of the autonomic nerve.

Before definite conclusions can be drawn, of course, more patients must be so treated. In proportion to the magnitude of the operation transthoracic sympathectomy and vagectomy is a relatively simple procedure as compared to pancreatectomy or any of the modifications thereof. It would seem that this patient has been restored to his normal activities; while it is true that he is dependent on insulin, and probably will be for an indefinite period, it is also recognized that the self-imposed starvation, alcoholism and addiction to drugs initiated to combat the excruciating pain of his disease were responsible for his total physical incapacity.

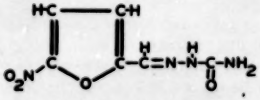
Council on Pharmacy and Chemistry

NEW AND NONOFFICIAL REMEDIES

The following additional articles have been accepted as conforming to the rules of the Council on Pharmacy and Chemistry of the American Medical Association for admission to New and Nonofficial Remedies. A copy of the rules on which the Council bases its action will be sent on application.

AUSTIN SMITH, M.D., *Secretary.*

NITROFURAZONE.—5-nitro-2-furaldehyde semicarbazone.—$C_6H_6O_4N_4$.—M. W. 198.15. A synthetic antibacterial substance derived from furfural, possessing the following structural formula:



Actions and Uses.—Nitrofurazone is a substituted furan compound possessing bacteriostatic and bactericidal properties; it is inhibitory in solutions with concentrations of 1:200,000 to 1:300,000 and bactericidal at 1:50,000 to 1:75,000. It is not soluble in much less than 5,000 parts of water. It is effective in vitro and in vivo against a variety of gram negative and gram positive bacteria; it has least bacteriostatic activity against Bacillus pyocyaneus and little bactericidal effect on Diplococcus pneumoniae.

Nitrofurazone is useful for topical application in the prophylaxis and treatment of superficial mixed infections common to contaminated wounds, burns, ulceration and certain diseases of the skin. It may be useful as an adjunct to surgery in the preparation of areas for skin grafting and in the treatment of osteomyelitis. Daily application for periods of one month or longer may produce a local reaction in a small percentage of cases. Sensitivity or intolerance to its local use has been occasionally observed and may be cause for its discontinuance. Because of this, continuous applications for periods as long as five days may be capable of producing sensitization. Photosensitization from sunlight has not been encountered. Variant bacterial strains showing induced resistance to sulfathiazole, penicillin or streptomycin are as susceptible to nitrofurazone as their parent strains. Induced resistance to the aforementioned agents does not entail resistance to nitrofurazone.

Systemic toxicity due to absorption of the compound is considered unlikely. Clinical studies indicate that the ingestion of 1 to 3 Gm. daily for long periods is fairly well tolerated by the majority of human subjects, but until more conclusive evidence of its mode of action and chemotherapeutic value becomes available its internal use cannot be recommended.

Dosage.—Nitrofurazone is used topically in an ointment-like base containing a concentration of 1:500 (0.2 per cent). It is applied locally either directly or to dressings that cover the infected area. The base is water soluble but liquefies at body temperature and may thus require special coverings to maintain effective contact with certain areas to which it may be applied. Dressings may be reinforced with cellophane or similar material, and petrolatum gauze may be used for a barrier to limit the absorption into the dressing. On exposure to light, the bright yellow nitrofurazone turns dark brown. This is not associated with any ill effects and may be avoided by covering with light dressings.

Tests and Standards.—

Nitrofurazone occurs as an odorless, lemon-yellow colored crystalline powder, which turns brown-black and decomposes at from 236 to 240 C. It is nearly tasteless but develops a bitter after-taste. It is slightly soluble in alcohol (1:590), in propylene glycol (1:350) and in polyethylene glycol mixtures; very slightly soluble in water (1:4,200); practically insoluble in ether. The crystals tend to darken on prolonged exposure to light.

When dissolved in water, nitrofurazone exhibits light absorption maxima in the ultraviolet region at 2,600 angstroms and at 3,750 angstroms, with a minimum at about 3,060 angstroms (1 mg. per hundred cubic centimeters).

Place about 10 mg. of nitrofurazone in a test tube, add 5 cc. of water and 5 cc. of 10 per cent sodium hydroxide solution: the nitrofurazone dissolves and the solution is colored dark orange-red.

Place about 50 mg. of nitrofurazone in a 50 cc. flask, add 1 Gm. of granular zinc, 10 cc. of alcohol and 20 cc. of dilute sulfuric acid. Heat on the steam bath: the nitrofurazone dissolves slowly and the solution becomes practically colorless.

Transfer about 1 Gm. of nitrofurazone to a stoppered cylinder and add 100 cc. of water. Shake the cylinder and contents for fifteen minutes and allow the solid to settle: the *Ph* of the supernatant solution is in the range 6.0 to 6.5.

Dry about 0.5 Gm. of nitrofurazone, accurately weighed, at 100 C. for one hour: the loss in weight does not exceed 0.1 per cent.

Char about 0.5 Gm. of nitrofurazone, accurately weighed; cool, moisten with sulfuric acid and finally ignite: the residue does not exceed 0.05 per cent.

The nitrogen content of nitrofurazone, as determined by the Dumas micro-method, is not less than 28.1 per cent nor more than 28.6 per cent.

Weigh accurately about 10 mg. of nitrofurazone, transfer it to a 1 liter volumetric flask and dissolve the solid in about 50 cc. of aldehyde-free alcohol. Fill to the mark with water, mix and determine the optical density, E, of this solution and also that of several dilutions, such as ½, ⅓ and ¼ respectively of the original concentration, at 3,750 angstroms. Use a comparison solution made by mixing 5 cc. of the aldehyde free alcohol with 95 cc. of water. Calculate the $E\ \frac{1\%}{1\ cm.}$ for nitrofurazone from the data obtained: the E values observed are a linear function of the concentration and the $E\ \frac{1\%}{1\ cm.}$ values, calculated for each concentration, yield an average value of 795 (± 2%).

EATON LABORATORIES, INC., NORWICH, N. Y.

Furacin Soluble Dressing 1:500: 113 Gm. and 454 Gm. jars. Each hundred grams contains Furacin 0.2 Gm., Carbowax (1,530) 30 Gm., Carbowax (4,000) 15 Gm. and polyethylene glycol (300) 54.8 Gm.

U. S. patent 2,319,481 (expires 1962); U. S. trademark 403,279.

CHINIOFON (See New and Nonofficial Remedies, 1946, p. 262).

The following dosage form has been accepted:

ABBOTT LABORATORIES, NORTH CHICAGO, ILL.

Enterab Chiniofon Tablets: 0.25 Gm. Each tablet is enteric coated with a resin prepared from stearic acid, phthalic anhydride and glycerin.

U. S. trademark 353,674.

THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

535 North Dearborn Street - - Chicago 10, Ill.

Cable Address - - - - "Medic, Chicago"

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Please send in promptly notice of change of address, giving both old and new; always state whether the change is temporary or permanent. Such notice should mention all journals received from this office. Important information regarding contributions will be found on second advertising page following reading matter.

SATURDAY, MAY 3, 1947

THE CENTENNIAL SESSION

Featured in this issue of THE JOURNAL is the program of the Centennial Session of the American Medical Association. Already there are indications that the attendance will rival that of any other meeting ever held in the history of the organization. The significance of the occasion has been marked by the issuance of a stamp by the Post Office of the United States commemorating the hundred years. These stamps will become available on June 9 at the time of the annual session. Another feature of the centennial is the publication of the "History of the American Medical Association," a book of some twelve hundred pages, with many illustrations. There is now definite assurance that this book will be available at the session.

Gen. Omar N. Bradley

Some of the unusual features of the program have been referred to previously in issues of THE JOURNAL. On Saturday, June 7, the Board of Trustees of the American Medical Association is tendering a dinner to honor the affiliated professions, industries and leaders in American life. The chairman of the Board of Trustees will preside. Addresses will be given by Gen. Omar Bradley, director of the Veterans Administration; Mr. Basil O'Connor, chairman of the American Red Cross and president of the National Foundation for Infantile Paralysis, Inc., and Mr. H. W. Prentis Jr., president of the Armstrong Cork Company, Lancaster, Pa., and past president of the National Association of Manufacturers. Arrangements are under way for broadcasting these three addresses on a national network.

On Sunday, June 8, at 11:30 in the morning a special religious service will be held in the Convention Hall in Atlantic City. There will be an organ recital followed by addresses given by Dr. Ralph Cooper Hutchison, Rabbi Joshua Liebman and Monsignor Fulton J. Sheen. From 11 to 11:30 a. m. the three speakers will broadcast over N. B. C.

On June 9 will come the official opening of the Technical and Scientific exhibits. This year attempts have been made to register by mail as many as possible of the physicians who plan to attend the session so as to avoid the congestion at the registration desk. Those who have been previously registered will need merely to present a card with a number that has been given to them; they will then be provided with the necessary programs, badges, guest cards and other informational material.

Basil O'Connor

On Monday afternoon, June 9, the first of the General Scientific Meetings will be held, as described in the program printed elsewhere in this issue. Our distinguished foreign guests who will participate in the program of Monday afternoon and Tuesday morning and afternoon include Professor George W. Pickering of London, Professor Herbert John Seddon of Oxford and Sir Howard Florey of Oxford.

For the Opening General Meeting on Tuesday night, which will be held in the Convention Hall, music will be provided by the Philadelphia Festival Orchestra conducted by Alexander Hilsberg. The address will be delivered by Dr. Edward L. Bortz, who has succeeded to the position of President-Elect of the American Medical Association, following the resignation of Dr. Olin West. The Distinguished Service Medal of the Association will be awarded. The retiring President, Dr. Harrison H. Shoulders, will receive the President's Medal, and the distinguished foreign guests will be introduced.

The scientific programs of the sections begin on Wednesday morning, June 11. In each of the sections a special paper will deal with a hundred years of progress in that medical or surgical specialty. Some hundreds of papers and a considerable number of symposiums are included, with a distinguished foreign guest on the program of each one of the scientific sections. Three special meetings will be held under the auspices of the Section on Miscellaneous Topics: the Session on History of Medicine, Session on Physical Medicine and Session on Allergy,

H. W. Prentis Jr.

Special attention is called here to the sessions of the Section on Preventive and Industrial Medicine and Public Health. Because of the increasing interest in the field of industrial health, the officers of this section have been at special pains to develop an unusual, timely and interesting program.

Attention is called also to a joint session of the Section on Internal Medicine and the Section on Exper-

imental Medicine and Therapeutics on Friday, June 12, which will be devoted to the subject "What's New in Medicine." Other symposiums will cover such subjects as Cancer Research, Virus Diseases, Therapeutic Abortion, Liver Disease and Ulcerative Colitis.

Wednesday night has been assigned to meetings of alumni associations, fraternities and similar groups.

Dr. Ralph C. Hutchison

On Thursday night, June 12, a reception will be tendered to the retiring President, the President and the President-Elect of the Association and of the Woman's Auxiliary, and also to the distinguished foreign guests. This reception will be held in the Ballroom of the Convention Hall, where two well known orchestras will provide the music for this occasion.

The Technical Exhibit and the Scientific Exhibit are by far the largest that have ever been arranged for an annual session of the American Medical Association. Every one of the leading industries related to the practice of medicine has arranged an exhibit, and special attention will be given in these exhibits to reflecting scientific progress in the field concerned. Special exhibits in the Scientific Exhibit will concern fractures, cardiovascular diseases and physical medicine.

Rabbi Joshua Loth Liebman

Throughout the week the Woman's Auxiliary will be holding the regular sessions of its representative body. The Woman's Auxiliary of the Association now includes more than 30,000 members.

The entertainment scheduled for this annual session guarantees to all who attend a week not only of intellectual and spiritual enrichment but also of relaxation. As has been customary in other recent meetings of the Association, there is featured on this occasion an exhibit of art including painting, etching and sculpturing by physicians under the auspices of the American Physicians' Art Association. Prizes are to be given for those who present concepts most clearly exemplifying the services of the American physician in war.

Msgr. Fulton J. Sheen

The convention city is noted for its Boardwalk and its location as an oceanside resort. The American Medical Golfing Association is planning a tournament which will no doubt utilize the available excellent golf courses in or near Atlantic City. Several of the great industries are planning cocktail parties, dinners and suppers which will feature this Centennial celebration.

Already the reservations of rooms in the Boardwalk hotels and those closely adjacent are taxing the capacity of the convention city. Excellent rooms are available in other hotels and in neighboring cities and villages, so that any one who wishes to participate need not fear the overcrowding. A request for reservation should be sent immediately to the chairman of the Subcommittee on Hotels, Dr. Robert A. Bradley (16 Central Pier, Atlantic City, N. J.) indicating the type of room that is desired.

THE TEACHING OF NUTRITION—II

From its earliest beginnings as a specialty pediatrics never has been concerned exclusively with treatment of the sick. The concept of preventive pediatrics and maintenance of health has been assigned an important part in pediatric practice. Nutrition has always been a prime factor in attaining the objectives of this specialty. Always the pediatrician has been expected to give scientific advice concerning the feeding of infants. Our modern knowledge of nutrition demands much more than just the feeding of infants.

The future of the human race depends on rearing healthy children. Growth, development and health are dependent on adequate nutrition. The physician must be well equipped to guide nutrition of the child. Rules of thumb cannot serve adequately; specialized knowledge is essential. The physician must know about normal nutrition for the maintenance of health. He must know about nutrition in disease so that recovery may be hastened.

While the basic facts of nutrition usually are given in courses other than pediatrics, nutrition must be taught as such in pediatric training. As in physiology, anatomy and chemistry, so also in nutrition the concrete and special application to the patient is often more impressive to the student than the abstract learning gained from the preclinical courses.

Although the teaching of nutrition has always been an integral part of pediatric teaching, such teaching was largely empirical until the last two decades. Now the teaching of nutrition is based firmly on knowledge. The great mass of information on nutrition obtained through the study of animals has been supplemented and augmented by studies of well and sick infants and children. These studies have been integrated with chemical and anatomic studies of growth and development. For example, knowledge of the rate of growth of the skeleton at various ages of infancy and childhood is of real assistance in determining the calcium requirement at any given age.

Nutrition in pediatrics includes much more than giving the required amounts of appropriate foods in health. It requires understanding of metabolic changes

in disease and compensating for these changes. The treatment of severe diarrhea, for example, requires knowledge of the salt and water metabolism of the body, of the factors required for replacement of the losses and of the practical application of the principles involved. Only recently has it become known that it is as important to supply lost potassium as it is to replace sodium and chloride if a baby is to recover from diarrhea. Also parenteral alimentation becomes necessary in diarrhea when the condition is severe and prolonged. In this situation detailed knowledge of maintenance requirements is necessary not only for water and salts but also for protein, energy and vitamins. Knowledge of proper use of protein hydrolysates is relatively new and in fact still incomplete.

Nutrition in pediatrics as in all other fields is constantly advancing. The instructor must keep up with these advances so that his teaching may be modern. Advances in nutrition are too many and too rapid to permit a teacher to maintain a static state of knowledge and be successful.

In the teaching of pediatrics some didactic instruction is necessary, but didactic training must be fully supplemented by opportunity for practical application. Instruction in infant nutrition, for example, has little meaning to the student until he is confronted with the responsibility of feeding a baby. The student will have the fullest training opportunity when he becomes an intern, but he should have as much opportunity as possible while still a student.

Demonstrations often are more effective in teaching than the giving of abstract information. While demonstrations in nutrition are more difficult than in some other fields, opportunity exists for many that are useful. When the infant or child is used as the subject for discussion, interest is maintained more easily and the discussion makes a greater impression.

Along with the teaching of nutrition in pediatrics, an understanding of the psychology of feeding has an important place. Many a child is undernourished because of chronic anorexia induced by mismanagement at meal time and emotional stresses associated with food and feeding. The teaching of nutrition in pediatrics must include the related psychologic aspects and the effect of emotional factors on eating. For the undergraduate medical student such teaching may of necessity be largely by didactic discussion. For the intern and resident staff, knowledge of these related factors is to be gained through responsibility for the care of patients and the easy availability of experts in the fields of dietetics and psychology or psychiatry. Presence of a dietitian and psychologist on regular ward rounds is helpful in this respect. The nutrition of the child should be discussed in relation to his disease, to his rehabilitation and to his home environment.

Current Comment

THE DISTINGUISHED SERVICE MEDAL

The Distinguished Service Medal, one of the highest awards within the gift of the American Medical Association, will be presented for the tenth time at the General Meeting of the Centennial Celebration at Atlantic City, Tuesday evening, June 10. The method of selecting the recipient of the Distinguished Service Medal is specifically defined in the By-Laws. Any Fellow of the Association may submit nominations, which should be sent, together with a record of the nominee's medical career and the reasons why he should be considered for the award, to the Chairman of the Committee on Distinguished Service Awards, Dr. William Weston, 1428 Lady Street, Columbia, S. C. The committee considers all nominations received, and from the total number of names received it submits five to the Board of Trustees. From those five the Board of Trustees selects three, which its chairman presents to the House of Delegates immediately after it has assembled for its first meeting. The House makes the final selection by ballot. Those who have received the Distinguished Service Medal of the A. M. A. have been physicians of distinction associated with the progress of medical science and with scientific discoveries of great importance. The first presentation was made to Dr. Rudolph Matas of New Orleans in 1938. Subsequent awards were made to Dr. James B. Herrick of Chicago in 1939, to Dr. Chevalier Jackson of Philadelphia in 1940, to Dr. James Ewing of New York in 1941, to Dr. Ludvig Hektoen of Chicago in 1942, to Dr. Elliott P. Joslin of Boston in 1943, to Dr. George Dock of Pasadena, Calif., in 1944, to Dr. George R. Minot of Boston in 1945 and to Dr. Anton J. Carlson of Chicago in 1946. Obviously, an extensive list of distinguished physicians nominated for the award will enable all concerned to determine a recipient whose selection will reflect honor not only on himself but also on the American Medical Association. Nominations should be received by Dr. Weston not later than May 15.

BILLS INTRODUCED TO RAISE ARMY PHYSICIANS' PAY

Bills were introduced in the Senate and House April 22 and April 23 respectively to increase the pay of medical officers of the Army. The differential between the income of civilian doctors and that of medical officers in the service probably has much to do with the fact that fewer medical officers are in the regular Army today than before the recent war began. The Army is having difficulty in attracting sufficient medical officers to fill even the present quota allowed by Congress. Should Congress provide increased pay for medical officers and should plans of the War Department go through to allow medical officers to spend more of their time in professional work the military service would become more attractive to well qualified young doctors. It is obviously proper that men who have given special attention and time to prepare themselves for advanced medical work should have this increased recognition.

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THE CENTENNIAL CELEBRATION

AMERICAN MEDICAL ASSOCIATION, NINETY-SIXTH ANNUAL SESSION
ATLANTIC CITY, N. J., JUNE 9-13, 1947

OFFICIAL CALL

TO THE OFFICERS, FELLOWS AND MEMBERS OF THE AMERICAN MEDICAL ASSOCIATION

The ninety-sixth annual session of the American Medical Association will be held in Atlantic City, June 9-13, 1947.

The House of Delegates will convene at 10 a. m. Monday, June 9. In the House the representation of the various constituent associations for 1947, 1948 and 1949 is as follows:

Alabama	2	Nevada	1
Arizona	1	New Hampshire	1
Arkansas	2	New Jersey	5
California	9	New Mexico	1
Colorado	2	New York	20
Connecticut	3	North Carolina	3
Delaware	1	North Dakota	1
District of Columbia	2	Ohio	7
Florida	2	Oklahoma	2
Georgia	3	Oregon	2
Idaho	1	Pennsylvania	10
Illinois	9	Rhode Island	1
Indiana	4	South Carolina	1
Iowa	3	South Dakota	1
Kansas	2	Tennessee	2
Kentucky	2	Texas	5
Louisiana	2	Utah	1
Maine	1	Vermont	1
Maryland	2	Virginia	2
Massachusetts	6	Washington	2
Michigan	5	West Virginia	2
Minnesota	4	Wisconsin	3
Mississippi	1	Wyoming	1
Missouri	4	Alaska	1
Montana	1	Hawaii	1
Nebraska	2	Isthmian Canal Zone	1
		Puerto Rico	1

The scientific sections of the American Medical Association, the Medical Corps of the Army, the Medical Corps of the Navy and the Public Health Service are entitled to one delegate each.

The Scientific Assembly of the Association will open with the General Scientific Meetings to be held Monday, June 9, starting at 2 p. m. and continuing throughout the morning and afternoon of Tuesday, June 10. The General Meeting at which the President will be installed will be held on Tuesday, June 10, starting at 8 p. m. The sections will meet Wednesday, Thursday and Friday, June 11, 12 and 13, as follows:

CONVENING AT 9 A. M. THE SECTIONS ON	CONVENING AT 2 P. M. THE SECTIONS ON
Internal Medicine.	Pediatrics.
Obstetrics and Gynecology.	Surgery, General and Abdominal.
Laryngology, Otology and Rhinology.	Ophthalmology.
Pathology and Physiology.	Experimental Medicine and Therapeutics.
Orthopedic Surgery.	Nervous and Mental Diseases.
Urology.	Dermatology and Syphilology.
Preventive and Industrial Medicine and Public Health.	Gastro-Enterology and Proctology.
Anesthesiology.	Radiology.
General Practice of Medicine.	Miscellaneous Topics: Session on History of Medicine. Session on Physical Medicine. Session on Allergy.

The Registration Bureau, which will be located on the Arena Floor, Atlantic City Convention Hall, will be open from 8:30 a. m. until 5:30 p. m. Monday, Tuesday, Wednesday and Thursday, June 9, 10, 11 and 12, and from 8:30 a. m. to 12 noon Friday, June 13.

HARRISON H. SHOULDERS, President.
ROY W. FOUTS, Speaker, House of Delegates.
GEORGE F. LULL, Secretary.

MEMBERS OF THE HOUSE OF DELEGATES

A Preliminary Roster of the Legislative Body of The American Medical Association

The list of members of the House of Delegates for the session is incomplete, as a number of the state associations are yet to hold their meetings at which delegates will be elected. The following is a list of the holdover members of the House of Delegates and of the newly elected members who have been reported to the Secretary in time to be included:

STATE DELEGATES

ALABAMA
Lloyd Noland, Fairfield.
A. A. Walker, Birmingham.

ARKANSAS
L. J. Kosminsky, Texarkana.
D. A. Rhinehart, Little Rock.

CALIFORNIA
Robertson Ward, San Francisco.
Samuel J. McClendon, San Diego.
Lowell S. Goin, Los Angeles.
John W. Green, Vallejo.

COLORADO
W. T. H. Baker, Pueblo.
William H. Halley, Denver.

CONNECTICUT
Joseph H. Howard, Bridgeport.
Creighton Barker, New Haven.
Thomas P. Murdock, Meriden.

DELAWARE
James Beebe, Lewes.

DISTRICT OF COLUMBIA
C. B. Conklin, Washington.
Herbert P. Ramsey, Washington.

FLORIDA
Edward Jelks, Jacksonville.
H. L. Pearson Jr., Miami.

IDAHO
Edward N. Roberts, Pocatello.

ILLINOIS
Rollo K. Packard, Chicago.
G. Henry Mundt, Chicago.
Charles H. Phifer, Chicago.
Edwin S. Hamilton, Kankakee.
Willis I. Lewis, Herrin.

INDIANA
Don F. Cameron, Fort Wayne.
F. S. Crockett, La Fayette.
H. G. Hamer, Indianapolis.
Alfred S. Giordano, South Bend.

IOWA
Thomas F. Thornton, Waterloo.
George Braunlich, Davenport.
G. V. Caughlan, Council Bluffs.

KANSAS
Forrest L. Loveland, Topeka.
Philip W. Morgan, Emporia.

KENTUCKY
J. B. Lukins, Louisville.
Clark Bailey, Harlan.

LOUISIANA
James O. Graves, Monroe.
V. H. Fuchs, New Orleans.

MAINE
Thomas A. Foster, Portland.

MARYLAND
Alfred T. Gundry, Baltimore.
Thomas S. Cullen, Baltimore.

MASSACHUSETTS
Charles E. Mongan, Somerville.
Dwight O'Hara, Boston.
Walter G. Phippen, Salem.
David D. Scannell, Boston.
Charles J. Kickham, Brookline.
Leland S. McKittrick, Boston.

MICHIGAN
Leo G. Christian, Lansing.
Frank E. Reeder, Flint.
W. D. Barrett, Detroit.
T. K. Gruber, Eloise.
Claude R. Keyport, Grayling.

MINNESOTA
Francis J. Savage, St. Paul.
E. W. Hansen, Minneapolis.
W. A. Coventry, Duluth.
A. W. Adson, Rochester.

MISSISSIPPI
J. P. Wall, Jackson.

MISSOURI
Arthur R. McComas, Sturgeon.
Warren L. Albee, Eldon.
Robert E. Schlueter, St. Louis.
James R. McVay, Kansas City.

MONTANA
R. F. Peterson, Butte.

NEVADA
M. J. Thorpe, Reno.

NEW HAMPSHIRE
Deering G. Smith, Nashua.

NEW JERSEY
Lucius F. Donohoe, Bayonne.
William F. Costello, Dover.
J. Wallace Hurff, Newark.
Hilton S. Read, Atlantic City.
Thomas K. Lewis, Camden.

NEW YORK
Thomas A. McGoldrick, Brooklyn.
John J. Masterson, Brooklyn.
Stephen R. Monteith, Nyack.
J. Stanley Kenney, New York.
George W. Kosmak, New York.
Thomas M. D'Angelo, Jackson Heights.
Harry Aranow, New York.
Louis A. VanKleeck, Manhasset.
Scott Lord Smith, Poughkeepsie.
Walter W. Mott, White Plains.
Walter P. Anderton, New York.
Herbert H. Bawden, Buffalo.
Albert F. R. Andresen, Brooklyn.
Thomas M. Brennan, Brooklyn.
James R. Reuling Jr., Bayside.
Floyd S. Winslow, Rochester.
Ralph T. B. Todd, Tarrytown.
Oliver W. H. Mitchell, Syracuse.
Edward P. Flood, New York.
Albert A. Gartner, Buffalo.

NORTH CAROLINA
Roscoe D. McMillan, Red Springs.
C. F. Brownlder, Goldsboro.
Hamilton W. McKay, Charlotte.

NORTH DAKOTA
A. P. Nachtwey, Dickinson.

OHIO
Edgar P. McNamee, Cleveland.
George A. Woodhouse, Pleasant Hill.
Carl A. Lincke, Carrollton.

OREGON
Edward H. McLean, Oregon City.
Raymond M. McKeown, Coos Bay, Marshfield.

PENNSYLVANIA
William L. Estes Jr., Bethlehem.
Thomas R. Gagion, Pittston.
Joseph Scattergood Jr., West Chester.
James Z. Appel, Lancaster.
Elmer Hess, Erie.
William Bates, Philadelphia.
Francis F. Borzell, Philadelphia.
Walter F. Donaldson, Pittsburgh.
E. Roger Samuel, Mount Carmel.
Charles L. Shafer, Kingston.

RHODE ISLAND
Guy W. Wells, Providence.

SOUTH DAKOTA
H. Russell Brown, Watertown.

TENNESSEE
E. T. Newell, Chattanooga.
H. B. Everett, Memphis.

TEXAS
Holman Taylor, Fort Worth.
F. J. L. Blasingame, Wharton.

UTAH
James P. Kerby, Salt Lake City.

VERMONT
Theodore H. Harwood, Burlington.

VIRGINIA
Henry B. Mulholland, Charlottesville.
J. Morrison Hutcheson, Richmond.

WASHINGTON
John H. O'Shea, Spokane.
R. L. Zech, Seattle.

WEST VIRGINIA
Ivan Fawcett, Wheeling.
Walter E. Vest, Huntington.

WISCONSIN
William D. Stovall, Madison.
Stephen E. Gavin, Fond du Lac.
James C. Sargent, Milwaukee.

WYOMING
George P. Johnston, Cheyenne.

ALASKA
Arthur N. Wilson, Ketchikan.

HAWAII
Forrest J. Pinkerton, Honolulu.

ISTHMIAN CANAL ZONE
Harry Eno, Colon.

PUERTO RICO
Manuel de la Pila, Ponce.

DELEGATES FROM THE SECTIONS AND GOVERNMENT SERVICES

INTERNAL MEDICINE
Charles T. Stone, Galveston, Texas.

SURGERY, GENERAL AND ABDOMINAL
Grover C. Penberthy, Detroit.

OBSTETRICS AND GYNECOLOGY
Jean Paul Pratt, Detroit.

OPHTHALMOLOGY
Arthur J. Bedell, Albany, N. Y.

LARYNGOLOGY, OTOLOGY AND RHINOLOGY
Burt R. Shurly, Detroit.

PEDIATRICS
William Weston, Columbia, S. C.

EXPERIMENTAL MEDICINE AND THERAPEUTICS
Edgar V. Allen, Rochester, Minn.

PATHOLOGY AND PHYSIOLOGY
L. W. Larson, Bismarck, N. D.

NERVOUS AND MENTAL DISEASES
Hans H. F. Reese, Madison, Wis.

DERMATOLOGY AND SYPHILOLOGY
Cornelius F. Lehmann, San Antonio, Texas.

PREVENTIVE AND INDUSTRIAL MEDICINE AND PUBLIC HEALTH
Stanley H. Osborn, Hartford, Conn.

UROLOGY
Roy B. Henline, New York.

ORTHOPEDIC SURGERY
J. Archer O'Reilly, St. Louis.

GASTRO-ENTEROLOGY AND PROCTOLOGY
Louis A. Buie, Rochester, Minn.

RADIOLOGY
B. R. Kirklin, Rochester, Minn.

ANESTHESIOLOGY
H. S. Ruth, Haverford, Pa.

GENERAL PRACTICE OF MEDICINE
Howard E. Griffin, Graham, Texas.

UNITED STATES ARMY
Frank L. Cole.

UNITED STATES NAVY
Morton D. Willcutts.

UNITED STATES PUBLIC HEALTH SERVICE
James A. Crabtree.

OFFICERS OF THE AMERICAN MEDICAL ASSOCIATION, 1946-1947

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PRESIDENT-ELECT—Edward L. Bortz, Philadelphia.

SECRETARY AND GENERAL MANAGER—George F. Lull, Chicago.

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ATLANTIC CITY — 1947

For the twelfth time in the last hundred years the American Medical Association is having its annual meeting in Atlantic City. The extraordinary advantages of Atlantic City made it the logical choice for the Centennial Session. These include the finest combination of facilities from the professional, business and entertainment points of view anywhere available.

The convention city is situated on an island closely adjacent to the New Jersey coast. Among the natural advantages are bathing, deep sea fishing, sailing and motor boating. Deep sea fishing has made Atlantic City a mecca for sportsmen. Speed boats and other craft wait on the waters of the Inlet to take passengers for a cruise on the ocean or along the calm waters that separate Atlantic City from the mainland. Seaplanes are available to carry passengers for short scenic trips or on hurried flights to distant cities.

The Great Piers

The amusement piers in Atlantic City are among the most famous in the world. They provide a great variety of amusements, vaudeville, motion pictures, minstrels, dancing, water sports and other attractions.

The Famous Boardwalk

Along the wide and spacious Boardwalk, built well above the sandy beach, millions of visitors parade each year to enjoy the dawn, the sunlight and the dusk of happy days or to find their favorite entertainment, hotel, supper club or café.

The Hotels

Some of the finest hotels in the world are located along the boardwalk. These skyscrapers are ready to cater to every wish of the guest, while an array of smart shops display interesting gifts and merchandise from all corners of the globe.

The Convention Hall

The building in which the American Medical Association will hold its meetings covers an area of seven acres fronted on the Boardwalk between Georgia and Mississippi avenues. The building has seating accommodations for nearly 75,000 persons, the main auditorium alone seating 41,000. The Convention Hall is so large that the famous Madison Square Garden in New York could be placed in one corner of the main hall. A thirteen story building 500 feet long and 200 feet wide could be erected within the main auditorium, leaving a space 100 feet on all four sides. The lighting of Convention Hall is a triumph of color and illumination. A pipe organ with 1,255 stops, one of the largest in the world, is in the main hall. The wiring used in this organ would twice girdle the earth.

Ventilation and Heating

The Convention Hall is ventilated by means of thirty-one motor driven fans with the capacity of 1,600 tons of air per hour; there is a much larger number of air vents capable of discharging 2,900 tons of air per hour. The temperature throughout the building is maintained by direct radiation and is automatically controlled. At the end of the auditorium is a well equipped stage capable of seating 5,000 persons. The lobby leading to Convention Hall has a vaulted passage 125 feet long and 50 feet wide, and from the lobby spacious corridors lead to the upper and lower levels of the auditorium. Along the boardwalk in front of Convention Hall and on the Pacific Avenue side are beautiful stores. From the arcade one may go direct to the interior of the Convention Hall.

Transportation

Atlantic City has adequate and perhaps unequaled transportation facilities which make it possible for millions of persons to

HOTEL TRAYMORE, WHERE THE HOUSE OF DELEGATES WILL MEET.

PANORAMA OF THE BOARDWALK IN ATLANTIC CITY, SHOWING BOARDWALK HOTELS. THE CONVE

go in and out of the city by motor, train, bus and airplane. It is but a short drive to Philadelphia over two famous "Pikes." Five highway bridges cross the Delaware River from Philadelphia toward Atlantic City, and five important ferry routes span the river from Philadelphia south. The Atlantic City airport, said to have been the first municipal airport in the world, is only a few hours from even our Far Western cities.

Rolling Chairs

For those wearing convention badges who desire to tour the Boardwalk in a rolling chair, special rates will be granted. There will be a nominal charge for one, two or three passengers between certain hotels and the Convention Hall.

Golf

Five splendid golf courses are only a few minutes ride from the center of Atlantic City, and on one of these, the Atlantic City Golf Club, the American Medical Golf Association will hold its thirty-first annual tournament, June 9. Following this eighteen hole competition about one hundred prizes will be awarded. There are also municipally owned tennis courts at the Inlet and the airport, and horseback riding throughout the year. The wide eight mile stretch of beach is an inviting and beautiful bridal path.

Garages

A great convenience to those who drive to the annual session of the American Medical Association is a garage in Convention Hall directly under the arena and the assembly hall. About 500 cars can be accommodated. A special rate will be made for the period of this convention.

Noiseless and Smokeless

One of the unusual qualities that makes Atlantic City attractive to numerous visitors each year is the atmosphere of calm and of seaside serenity that prevails on the Boardwalk and in the hotels, theaters and restaurants. This most desirable quality is achieved largely through the absence of automobiles on the Boardwalk and the absence of smoke and soot because there are no large industries.

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REGISTRATION

The Bureau of Registration will be located on the arena floor of the Atlantic City Convention Hall. A branch postoffice in charge of government postoffice officials will be available for visitors, and an information bureau will be operated in connection with the Bureau of Registration.

Who May Register

Only Fellows, Affiliate, Associate and Honorary Fellows and Invited Guests may register and take part in the work of the sections. Fellows of the Scientific Assembly are those who have, on the prescribed form, applied for Fellowship, subscribed to THE JOURNAL and paid their Fellowship dues for the current year. Fellowship dues and subscription to THE JOURNAL are included in the one annual payment of $8, which is the regular subscription price of THE JOURNAL. Fellowship cards are sent to all Fellows after payment of annual dues, and these cards should be presented at the registration window. Any who have not received cards for 1947 should secure them at once by writing to the American Medical Association, 535 North Dearborn Street, Chicago 10.

Advance Registration

Those Fellows who have filled in advance registration cards and sent them to the office of the American Medical Association should present the registration identification card received from the office of the Association to the attendant at any window of the Registration Bureau. The attendant will then hand the registrant a Fellow's badge, an official program and a button for each of his guests.

Members in Good Standing Eligible to Apply for Fellowship in the Association

Members in good standing in the American Medical Association are those members of component county medical societies and of constituent state and territorial medical associations whose names are officially reported for enrolment to the Secretary of the American Medical Association by the secretaries of the constituent medical associations. All members in good standing may apply for Fellowship in the Scientific Assembly and are urged to qualify as Fellows before leaving home in order that pocket cards may be secured and brought to Atlantic City so that registration can be more easily and more promptly effected.

Application forms may be had on request.

Those subscribers to THE JOURNAL who have not received pocket cards for 1947 should write to the American Medical Association in order to obtain application blanks and information as to further requirements.

Register Early

Fellows living in Atlantic City, as well as all other Fellows who are in Atlantic City on Monday and Tuesday, should register as early as possible.

The names and local addresses of those who register will be included in the issue of the *Daily Bulletin* appearing the next day, and this will enable visiting physicians to find friends who have registered.

NTION AUDITORIUM IS LOCATED AT A CONVENIENT DISTANCE FROM MOST OF THE LARGE HOTELS.

Suggestions That Will Facilitate Registration

Fellows should fill out completely the spaces on both sections of the front of the registration card. Physicians who desire to qualify as Fellows should fill out completely the spaces on both sections of the front of the registration card and sign the application on the back. These cards will be found on the tables.

Entries on the registration card should be written plainly, or printed, as the cards are given to the printer to use as "copy" for the *Daily Bulletin*, which appears on Tuesday, Wednesday, Thursday and Friday mornings during the week of the session.

Fellows who have their pocket cards with them can be registered with little or no delay. They should present the filled out registration card, together with the pocket card, at one of the windows marked "Registration by Pocket Card." There the clerk will compare the two cards, stamp the pocket card and return it and supply the Fellow with a badge, a copy of the official program and other printed matter of interest to those attending the annual session.

As previously stated, it will assist in registering if those who desire to qualify as Fellows will file their applications and qualify as Fellows by writing directly to the American Medical Association, 535 North Dearborn Street, Chicago 10, so that their Fellowship may be entered not later than May 10. Any applications that are received later than May 10 will be given prompt attention, but the Fellowship pocket card may not reach the applicant in time for him to register at the Atlantic City session.

It will be possible for members of the organization to qualify as Fellows at Atlantic City. In order to do this, applicants for Fellowship will be required to fill out both sections of the front of the registration card and to sign the formal application that is printed on the reverse side of the card. It is suggested that those members who apply for Fellowship at Atlantic City bring with them their state membership cards for the year 1947. The state membership card should be presented along with the filled in registration card at the window in the booth marked "Applicants for Fellowship and Invited Guests."

As already stated, registration can be effected more easily and more promptly if members will qualify as Fellows before leaving home.

Registration for General Officers and Delegates at the Hotel Traymore

General Officers of the American Medical Association and members of the House of Delegates may register for the Scientific Assembly outside the Rose Room of the Hotel Traymore. This arrangement is made for the convenience of members of the House of Delegates, which will convene on Monday morning at 10 o'clock in the Rose Room of the Hotel Traymore. Delegates are requested to register for the Scientific Assembly before presenting credentials to the Reference Committee on Credentials of the House of Delegates. Registration of delegates for the Scientific Assembly will begin at 8 o'clock Monday morning, June 9, and delegates are urged to register early so that all members of the House of Delegates may be seated in time for the opening session of the House.

TRANSPORTATION

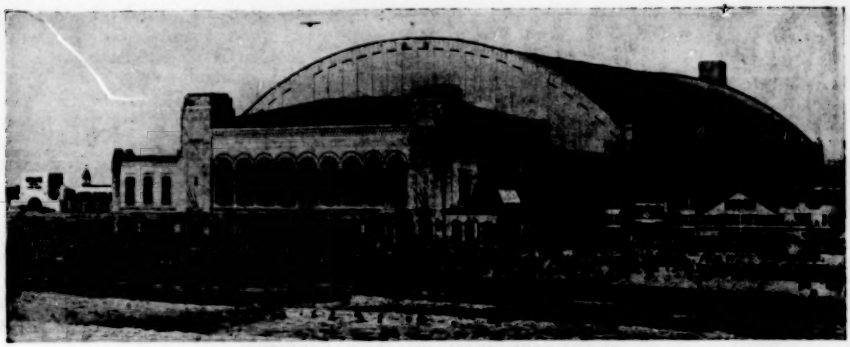
It is suggested that those Fellows who contemplate traveling to Atlantic City to attend the annual session of the Association secure information concerning railroad and airplane travel directly from their local ticket agents, who are in a position to give them information regarding train or plane schedules and fares. Transportation agencies—railroads and airlines—have been notified to contact all Fellows who have registered in advance.

Northwest Airlines, Inc.

Northwest Airlines will give all possible help and assistance to members of the medical profession in planning itineraries and requesting reservations for transportation to the centennial celebration. Doctors desirous of being on the same flight with friends boarding at intermediate points along Northwest's coast to coast route should so advise the reservations office at the time the initial reservation is made.

ATLANTIC CITY HOTELS

A limited number of rooms are still available at certain hotels in Atlantic City. It is suggested that if hotel reservations have not yet been secured by Fellows who expect to attend the Atlantic City session, such Fellows write directly to DR. ROBERT A. BRADLEY, SUBCOMMITTEE ON HOTELS, 16 CENTRAL PIER, ATLANTIC CITY, N. J.



THE CONVENTION HALL, WHERE THE ANNUAL SESSION WILL BE HELD.

MEETING PLACES

HOUSE OF DELEGATES: Rose Room, Hotel Traymore, Boardwalk at Illinois Avenue.

GENERAL SCIENTIFIC MEETINGS: Ballroom, Second Floor, Convention Hall.

GENERAL MEETING: Ballroom, Second Floor, Convention Hall.

GENERAL HEADQUARTERS, REGISTRATION BUREAU, SCIENTIFIC EXHIBIT, TECHNICAL EXHIBITS, INFORMATION BUREAU AND BRANCH POSTOFFICE: Convention Hall.

SECTIONS OF SCIENTIFIC ASSEMBLY

INTERNAL MEDICINE: Ballroom, Second Floor, Convention Hall.

SURGERY, GENERAL AND ABDOMINAL: Westminster Hall, Chelsea Hotel.

OBSTETRICS AND GYNECOLOGY: Westminster Hall, Chelsea Hotel.

OPHTHALMOLOGY: Embassy Salon, Ambassador Hotel.

LARYNGOLOGY, OTOLOGY AND RHINOLOGY: Embassy Salon, Ambassador Hotel.

PEDIATRICS: Ballroom, Second Floor, Convention Hall.

EXPERIMENTAL MEDICINE AND THERAPEUTICS: Wedgewood Room, Chelsea Hotel.

PATHOLOGY AND PHYSIOLOGY: Wedgewood Room, Chelsea Hotel.

NERVOUS AND MENTAL DISEASES: St. Dennis Room, Dennis Hotel.

DERMATOLOGY AND SYPHILOLOGY: Wedgewood Room, Marlborough-Blenheim Hotel.

PREVENTIVE AND INDUSTRIAL MEDICINE AND PUBLIC HEALTH: Trellis Room, Ritz-Carlton Hotel.

UROLOGY: Wedgewood Room, Marlborough-Blenheim Hotel.

ORTHOPEDIC SURGERY: St. Dennis Room, Dennis Hotel.

GASTRO-ENTEROLOGY AND PROCTOLOGY: Trellis Room, Ritz-Carlton Hotel.

RADIOLOGY: Room 20, Convention Hall.

ANESTHESIOLOGY: Room 20, Convention Hall.

GENERAL PRACTICE OF MEDICINE: Cambridge Hall, Claridge Hotel.

MISCELLANEOUS TOPICS: Session on History of Medicine, Session on Physical Medicine and Session on Allergy: Cambridge Hall, Claridge Hotel.

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1947

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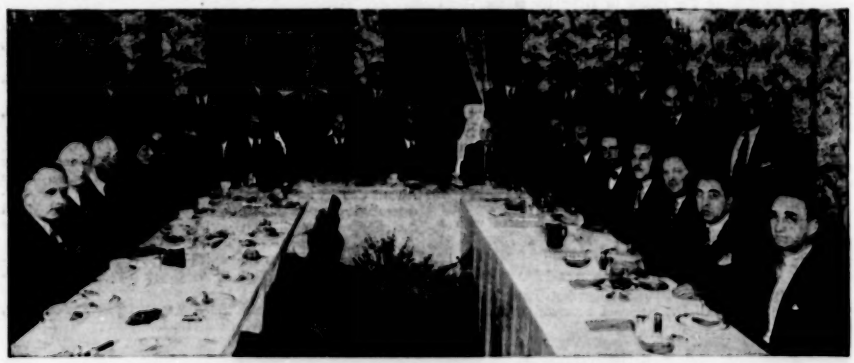

LOCAL COMMITTEE ON ARRANGEMENTS

LUNCHEON MEETING IN HOTEL TRAYMORE OF THE LOCAL COMMITTEE ON ARRANGEMENTS FOR THE CENTENNIAL MEETING. THOSE PRESENT INCLUDE DR. DAVID B. ALLMAN, GENERAL CHAIRMAN, ATLANTIC CITY COMMITTEE; MRS. DAVID B. ALLMAN, GENERAL CHAIRMAN FOR THE WOMAN'S AUXILIARY; DR. CLARENCE L. ANDREWS, DR. ROBERT A. BRADLEY, DR. HAROLD S. DAVIDSON, DR. JEAN A. GRUHLER, DR. EDWARD GUION, DR. SAMUEL HALPERN, DR. H. L. HARLEY, DR. CHARLES HYMAN, DR. WILLIAM W. HERSOHN, DR. HERMAN KLINE, DR. FRANK W. KONZELMANN, DR. I. E. LEONARD SR., DR. ANTHONY G. MERENDINO, DR. E. H. NICKMAN, DR. SAMUEL L. SALASIN, DR. D. WARD SCANLAN, DR. C. H. deT. SHIVERS, DR. HARRY SUBIN, DR. BAXTER H. TIMBERLAKE, DR. EDWARD F. UZZELL, DR. L. H. WALKER, DR. CLARENCE B. WHIMS, DR. LAWRENCE A. WILSON, DR. MORRIS FISHBEIN, CHICAGO, GUEST SPEAKER, MRS. FISHBEIN, MR. A. H. SKEAN OF THE CONVENTION BUREAU AND MRS. SKEAN.

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S. Eugene Dalton — Nathan L. Lippman
Samuel M. Diskan — H. Donald Marshall
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ENTERTAINMENT

Conference of County Society Officers

There will be a conference of county medical society officers on Sunday, June 8, at 2:30 p. m., in the American Room of the Hotel Traymore. It will be conducted in round table fashion with Dr. A. M. Mitchell of Terre Haute, Ind., as moderator. Fellows are invited to attend this conference.

Dinner for Delegates

A dinner is being arranged by the Board of Trustees of the American Medical Association for Monday, June 9, for members of the House of Delegates and officers of the Association in the American Room of the Hotel Traymore. Complete information concerning the dinner will be available at the first meeting of the House of Delegates on Monday morning, June 9.

Luncheon for Delegates

A luncheon for the members of the House of Delegates and the officers of the American Medical Association is being planned for Tuesday noon, June 10, between the morning and afternoon meetings of the House of Delegates at the Hotel Traymore.

Installation of President

The General Meeting at which the President will be installed will be held on Tuesday evening, June 10, in the Ballroom of Convention Hall. The program will begin at 8 o'clock with a musical presentation by the Philadelphia Festival Orchestra followed by the regular program as published elsewhere in this section.

Breakfast for Vice Presidents

There will be a breakfast for all past Vice Presidents of the American Medical Association on Tuesday morning, June 10, at 8 o'clock at the Shelburne Hotel.

President's Reception and Ball

The President of the Association will be honored with a reception and ball to be held Thursday evening, June 12, at 9 o'clock in the Ballroom of Convention Hall.

Luncheons and Dinners

Alpha Omega Alpha, Dinner, Thursday, June 12, Hotel Traymore, 6:30 p. m. Dr. Reginald Fitz will introduce the foreign guests.

Alumnae Association of Woman's Medical College of Pennsylvania, Dinner, Wednesday, June 11, at 7 o'clock, in Ozone Room, Hotel Dennis.

Association of Alumni, College of Physicians and Surgeons of Columbia University, Banquet, Thursday, June 12, at 6 p. m. at Hotel Claridge. Dress informal. Eleven Dollars a person. Send check to Chairman of Dinner Committee, Dr. Robert B. Durham, 110 South North Carolina Avenue, Atlantic City, N. J.

Christian Medical Society, Banquet, Wednesday, June 11, at 6:30 p. m. at the Hotel Senator. Four dollars a person. Please send reservations to Dr. Chester L. Schneider, 6516 North Ninth Street, Philadelphia 26.

Harvard Medical Alumni Association, Dinner, Wednesday, June 11, at 7 o'clock at Hotel Claridge. Tickets on sale at booth in Convention Hall.

Medical Alumni Association of Temple University, Luncheon, Wednesday, June 11, at 12:30 at Marlborough-Blenheim Hotel.

Past Chairmen of Section on Internal Medicine of American Medical Association, Luncheon, Wednesday, June 11.

Phi Rho Sigma, Luncheon, Wednesday, June 11 at 12 noon, at the Marlborough-Blenheim Hotel.

Philip Morris & Co., Supper Show, Submarine Grill, Hotel Traymore, Tuesday, June 10, at 10 p. m.

National Gastroenterological Association, Banquet, Thursday, June 5, Hotel Chelsea, at which the winner of the National Gastroenterological Association's 1947 Cash Prize Award Contest for the best unpublished contribution on gastroenterologic or an allied subject will receive the prize of $100 and a certificate of merit. The guest speaker will be Dr. Homer T. Smith, whose subject is "Plato and Clementine."

New York Eye and Ear Infirmary, Alumni Dinner, Wednesday, June 11, at 6:30 in Chevy Chase Room, Marlborough-Blenheim Hotel.

Tufts Medical Alumni Association, Dinner, Wednesday, June 11, at 6:30 at Ritz-Carlton Hotel.

STAMP COMMEMORATING A. M. A. CENTENNIAL

Postmaster General Robert E. Hannegan has approved the issuance of a commemorative postage stamp honoring the doctors of America, the Post Office Department announced on April 8. The special stamp will be of the three cent variety and will be placed on sale June 9 on the occasion of the hundredth anniversary of the founding of the American Medical Association. "In so honoring the American doctor," Mr. Hannegan said, "we are paying tribute to the men and women of medicine who devote their lives to the cause of humanity. Alleviation of pain and suffering and the betterment of mankind are their creed. The contribution which they have made to our national life is one of which all America can be proud and grateful." Details as to the place of sale and description of the stamp will be announced later.

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WOMAN'S AUXILIARY

The Woman's Auxiliary to the American Medical Association will hold its twenty-fourth annual meeting in Atlantic City, June 9 to 12.

A cordial invitation is extended to the wives and guests of members of the American Medical Association attending the convention to be present at the general sessions and take part in the social functions of the Woman's Auxiliary. Headquarters will be at Haddon Hall, where all meetings and social events will be held unless otherwise specified in the program.

Please register early and secure your badge. Tickets will be available at the headquarters at Haddon Hall only and should be purchased as soon after arrival as possible.

Members of the Hospitality Committee will be at the various hotels to assist in any possible manner.

Registration Hours

Sunday	12 m. to 4 p. m.
Monday	9:30 a. m. to 4 p. m.
Tuesday	9:30 a. m. to 4 p. m.
Wednesday	9:30 a. m. to 4 p. m.
Thursday	9:30 a. m. to 4 p. m.

12 m. Luncheon and meeting of the Board of Directors, Bakewell Room. Mrs. Jesse D. Hamer presiding.

12 m. Busses will leave for Atlantic City Race Track. Luncheon may be procured at the club house or food bars (club house tickets $3.60; grandstand tickets $1.80).

8:30 p. m. Fashion Show, Ballroom, Convention Hall.

PROGRAM

TUESDAY, JUNE 10

9 a. m.

Formal opening of the twenty-fourth annual meeting of the Woman's Auxiliary to the American Medical Association.
Vernon Room, Lounge Floor.

Presiding.....MRS. JESSE D. HAMER, President
Invocation.....REV. L. F. GARNET
Rector, St. Andrews Lutheran Church
Pledge of Loyalty to the Woman's Auxiliary to the American Medical Association.....MRS. DAVID W. THOMAS
Greetings.....HON. JOSEPH ALTMAN, Mayor, Atlantic City
DR. LAWRENCE A. WILSON, President, Atlantic County Medical Society

JUST BEACH AND OCEAN AND THE BOARDWALK AND THE SUNLIGHT. THESE MAKE ATLANTIC CITY.

Preconvention Meetings

SUNDAY, JUNE 8, 1947

12 m. to 4 p. m. The members of the Hospitality Committee will welcome members and guests of the Woman's Auxiliary.

4 p. m. to 6 p. m. Tea honoring Mrs. Jesse D. Hamer, National President, and Mrs. Eustace A. Allen, President-Elect, will be given for the members of the National Board of Directors, state presidents and presidents-elect and guests, by invitation only.

Garden Room, Lounge Floor, Haddon Hall.

Hostesses: The Woman's Auxiliary to the Medical Society of New Jersey.

COMMITTEE MEETINGS

1 p. m. Nominating Committee, Room D. Called by the president, Mrs. Jesse D. Hamer.

8 p. m. Finance Committee, Room C. Mrs. Scott C. Applewhite, chairman.

MONDAY, JUNE 9

10 a. m. Revisions Committee Meeting, Room D. Mrs. Roscoe E. Mosiman, chairman.

Address of Welcome.....MRS. FREDERICK G. WANDALL
President, Woman's Auxiliary to the Medical Society of New Jersey
Response.....Mrs. W. D. KIRKPATRICK
President, Woman's Auxiliary to the Washington State Medical Society
Presentation of Convention Chairman..MRS. DAVID B. ALLMAN

INTRODUCTIONS

Presentation of President-Elect.....MRS. EUSTACE A. ALLEN
Roll Call..MRS. WILLIAM J. BUTLER, Constitutional Secretary
Minutes of the 23d Annual Meeting..MRS. WILLIAM J. BUTLER
Convention Rules of Order.....MRS. GEORGE TURNER
Credentials and Registration.....MRS. WILLIAM E. DODD
Address of the President.....MRS. JESSE D. HAMER

REPORTS OF OFFICERS

President-Elect.....MRS. EUSTACE A. ALLEN
First Vice President.....MRS. DAVID B. ALLMAN
Second Vice President.....MRS. LEO J. SCHAEFER
Third Vice President.....MRS. E. ARTHUR UNDERWOOD
Fourth Vice President.....MRS. JOHN P. HELMICK

Treasurer.....MRS. HAROLD F. WAHLQUIST
Auditor.....MRS. HAROLD F. WAHLQUIST
Constitutional Secretary.....MRS. WILLIAM J. BUTLER

12:30 p. m. Luncheon in honor of the past presidents of the Woman's Auxiliary to the American Medical Association, Rutland Room, First Floor. Tickets, $4.

2 p. m.

AFTERNOON SESSION

Report of the Board of Directors.....MRS. JESSE D. HAMER
Reports of Chairmen of Standing Committees:
Editorial.....MRS. JAMES P. SIMONDS
Finance.....MRS. SCOTT C. APPLEWHITE
Hygeia.....MRS. ARTHUR I. EDISON
Legislation.....MRS. LUTHER H. KICE
Organization.....MRS. DAVID B. ALLMAN
Postwar Planning.....MRS. ROLLO K. PACKARD
Program.....MRS. HENRY GARNJOBST
Public Relations.....MRS. S. DALE SPOTTS
Revisions.....MRS. ROSCOE E. MOSIMAN
Report of the Historian.....MRS. ELMER L. HENDERSON

12:15 p. m.

Annual luncheon in honor of Mrs. Jesse D. Hamer, president, and Mrs. Eustace A. Allen, president-elect, Rutland Room, first floor. Tickets, $4.

Guests of honor: Dr. H. H. Shoulders, President, Dr. Edward L. Bortz, President-Elect, Dr. J. J. Moore, Treasurer, Dr. George F. Lull, Secretary and General Manager, Dr. Morris Fishbein, Editor of THE JOURNAL and HYGEIA, and the members of the Advisory Council of the Woman's Auxiliary to the American Medical Association.

1:30 p. m.

Joint meeting of the Advisory Council of the American Medical Association and the Board of Directors of the Woman's Auxiliary.

3:00 p. m.

AFTERNOON SESSION

Unfinished Business.
New Business.
Report of the Nominating Committee by the Chairman.
Election of Officers.

THE AUDITORIUM (RIGHT) WITH RITZ CARLTON AND AMBASSADOR HOTELS AND THE PRESIDENT HOTEL TO THE LEFT.

Report of the Central Office.....MISS MARGARET WOLFE
Report of the Nominating Committee (first reading).
Election of the 1947 Nominating Committee.

4 p. m.

Round Table Discussion:
Hygeia.....MRS ARTHUR I. EDISON
Legislation.....MRS. LUTHER H. KICE
Program.....MRS. HENRY GARNJOBST
Public Relations.....MRS. S. DALE SPOTTS

8 p. m.

General Meeting of the AMERICAN MEDICAL ASSOCIATION, Ballroom, Convention Hall. Members of the Woman's Auxiliary and guests are welcome.

WEDNESDAY, JUNE 11

9 a. m.

General Session of the Woman's Auxiliary to the American Medical Association, Vernon Room, Lounge Floor.
Presiding.....MRS. JESSE D. HAMER
Minutes.....MRS. WILLIAM J. BUTLER
Announcements.....MRS. DAVID B. ALLMAN
Credentials and Registration.....MRS. WILLIAM E. DODD
In Memoriam.....MRS. RALPH EUSDEN
Resolutions.....MRS. FRANK N. HAGGARD
Reports of state presidents.
Installation of Officers and Presentation of President's Pin.....MRS. ROLLO K. PACKARD
Inaugural Address.....MRS. EUSTACE A. ALLEN
Convention Courtesy
Resolutions.....MRS. LODOVICO MANCUSI-UNGARO
Minutes.
Adjournment.

THURSDAY, JUNE 12

9:30 a. m.

Meeting of the Board of Directors, Solarium (Lounge Floor)
Presiding.....MRS. EUSTACE A. ALLEN

1:00 p. m.

Busses will leave for Renault's Champagne Winery, Egg Harbor City.

6:30 p. m.

Annual dinner of the Woman's Auxiliary for members, husbands and guests. Formal.
Vernon Room, Lounge Floor.....Tickets $6.00

9:00 p. m.

Reception and ball in honor of the President of the American Medical Association. Ballroom, Convention Hall.

FRIDAY, JUNE 13

Exhibits at Convention Hall.

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PHYSICIANS' ART EXHIBIT

The American Physicians' Art Association and Literary Guild will hold an extensive and interesting exhibit in the Atlantic City Convention Hall during the session. The three distinct departments in this show are (1) the regular yearly art exhibit, in which over one hundred cups will be awarded, (2) the $34,000 bond contest offered by Mead Johnson & Company for pictures and sculpture done by physicians depicting Courage and Devotion Beyond the Line of Duty, (3) nonmedical writings by physicians, prose and poetry, for which the winners in twelve different fields of writing will be awarded beautiful plaques.

This year doctor members are sending in pieces not only from the whole of the United States, Canada, Hawaii and the Philippines but also from leading cities of Central and South America.

Judges for the two art exhibits are being selected from leading professional artists of Philadelphia and New York. There will be nearly two thousand pieces submitted.

For further information consult F. H. Redewill, M.D., Secretary of the American Physicians' Art Association and American Physicians' Literary Guild, 526 Flood Building, San Francisco 2.

GOLF TOURNAMENT

The American Medical Golfing Association will hold its thirty-first tournament on Monday, June 9. For those playing thirty-six holes, Linwood Country Club has been reserved; the A. M. G. A. Fellows who play only one round will be accommodated at the Atlantic City Country Club, where the dinner will be held and prizes awarded.

Trophies and Prizes

Trophies will be awarded for the Association Championship, the Will Walter Trophy; the Association Handicap Championship, the Detroit Trophy; Championship Flight, First Gross, the St. Louis Trophy; Championship Flight, First Net, the President's Trophy, donated by James W. Morgan, San Francisco; Eighteen Hole Championship, the Golden State Trophy; Eighteen Hole Handicap Championship, the Ben Thomas Trophy and the Atlantic City Trophy; Maturity Event, the Minneapolis Trophy; and the Old Guard Championship, the Wendell Phillips Trophy.

In addition to these, approximately seventy-five other prizes will be in competition.

Two Courses in Excellent Condition

Both the Atlantic City Country Club and the Linwood Country Club courses are ideal for experts and a treat for players with higher handicaps. Fellows may tee off between 7:30 a. m. and 2:30 p. m. Luncheon will be served at both clubs. The golfers' banquet will be held in the Atlantic City Country Club house at 7 p. m. The awarding of the many trophies and prizes will follow. Entertainment will be spontaneous—by Fellows.

Atlantic City Committee on Arrangements

The Atlantic City Committee on Arrangements is under the chairmanship of Jean A. Gruhler, 101 South Indiana Avenue, Atlantic City. He will be assisted by L. Elmore Hess, James H. Mason, B. H. Timberlake and C. B. Whims.

Application for Membership

The A. M. A. Centennial Tournament will be a highly celebratory event. Old and new Fellows will have the opportunity to enjoy a wonderful day of golf, to win a nice prize and to join in the famous goodfellowship of the American Medical Golfing Association.

All male Fellows of the American Medical Association are cordially invited to become Fellows of the American Medical Golfing Association. Write Secretary Bill Burns, 2020 Olds Tower, Lansing 8, Mich., for application blank.

Participants in the tournament are required to present their home club handicap, signed by the club secretary, or to accept a handicap set by the A. M. G. A. Handicap Committee. No handicap over 30 is allowed. A Fellow absent from the annual banquet following the tournament forfeits his rights to a trophy or prize.

ATLANTIC CITY GOLF CLUB, WHERE THE ANNUAL TOURNAMENT WILL BE HELD.

American Medical Golfing Association Officers

James W. Morgan, San Francisco, is President, J. A. Bargen, Rochester, Minn., and Frank Sheehy, San Francisco, are vice presidents of the A. M. G. A. President Morgan anticipates that over 250 Fellows of the A. M. G. A. will play in the enjoyable A. M. G. A. Tournament in Atlantic City on Monday, June 9.

MEETINGS OF OTHER ORGANIZATIONS

Aero Medical Association

The eighteenth annual meeting of the Aero Medical Association will be held in Atlantic City at the Ritz-Carlton Hotel from June 4 to June 6. There will be registration and scientific sessions on the three days, the annual business session being held on Friday, June 6. The winners of the Theodore C. Lyster Award and Raymond F. Longacre Award will be announced at the annual banquet on Thursday, June 5.

American College of Chest Physicians

The American College of Chest Physicians will hold its thirteenth annual meeting at the Ambassador Hotel, June 5 to 8. Scientific sessions will be held on each day, a program on Information Please in Diseases of the Chest being planned for 8 p. m. on Friday, June 6. Oral examinations for fellowship will be conducted at 9 a. m. and written examinations at 2 p. m. on Thursday, June 5. The dinner, International Night, will be at 6:30 Thursday, June 5.

American College of Radiology

The regular annual meeting of the American College of Radiology will be held at Haddon Hall, June 8, starting at 3 p. m., at which time there will be received the reports of the officers, of standing commissions and of standing committees followed by new business, the report of the nominating committee and the election of officers.

American Society of Electroencephalography

The first annual meeting of the American Society of Electroencephalography will be held at the Marlborough-Blenheim Hotel June 13 to 15. All interested are invited to attend.

National Gastroenterological Association

The twelfth annual convention and scientific sessions of the National Gastroenterological Association will be held June 4 to 6. The program will consist of eighteen separate papers on various phases of gastroenterology and allied subjects. The program and other details may be obtained from the National Gastroenterological Association, 1819 Broadway, New York 23. At the luncheon round table conference on Thursday, June 5, Dr. Hyman I. Goldstein of Camden, N. J., will speak on the history of gastroenterology and the development of this specialty in America.

American Society for the Study of Sterility

The third annual convention of the American Society for the Study of Sterility will convene at the Hotel Strand on June 7 and 8, and the general theme of the meetings will be that of attempting to disseminate to the physician treating marital infertility an overall picture of the latest advances in reproduction. The program will consist of original papers, round table discussions, scientific exhibits and personal demonstration. Registration is open to members of the medical and allied professions. For additional information, write Dr. John O. Haman, 490 Post Street, San Francisco 2.

American Neisserian Medical Society

The ninth annual session of the American Neisserian Medical Society will convene June 8 at the Marlborough-Blenheim Hotel. The scope of the society has been increased to include the medical and public health aspects of all the venereal diseases. All physicians interested are cordially invited to attend.

Dates of Meetings of Other Organizations in Atlantic City Prior to Annual Session of American Medical Association

American College of Allergists, Hotel Senator, June 6-8.
American Geriatrics Society, Hotel Brighton, June 5-7.
American Heart Association, Hotel President, June 6-7.
American Medical Women's Association, June 7-8.
American Proctologic Society, June 7.
American Radium Society, June 8.
American Society for the Study of the Blood, Claridge Hotel, June 8 (organization meeting).
American Society of Clinical Pathologists, June 4-8.
American Therapeutic Society, Chalfonte Hotel, June 6-7.
Association for the Study of Internal Secretions, June 6-7.

DISTINGUISHED FOREIGN GUESTS

The following distinguished foreign guests will be present and participate in the work of the Scientific Assembly at the Centennial Celebration:

Sir William Heneage Ogilvie, surgeon to Guy's Hospital and Royal Masonic Hospital, London, England; examiner in surgery to Cambridge and Oxford universities and the examining board of the Royal Colleges; vice president of the Royal College of Surgeons of England, 1943-1947; editor of the *Practitioner;* author of the Treatment of Fractures in General Practice and various other works. Dr. Ogilvie in the second world war was consulting surgeon to the East African Campaign, the Middle East Force and the Eastern Command.

Sir William H. Ogilvie

Dr. R. M. B. MacKenna, physician in charge of the dermatologic department of St. Bartholomew's Hospital, London; physician at St. John's Hospital for Diseases of the Skin; editor of the recent book "Modern Trends in Dermatology"; author of Aids to Dermatology and of the third and fourth editions of R. W. MacKenna's manual "Diseases of the Skin"; on the editorial board of the *Quarterly Review of Dermatology and Syphilology;* fellow of the Royal Society of Medicine; adviser in dermatology to the War Office; honorary dermatologist, Royal Liverpool United Hospital; honorary assistant dermatologist, Liverpool Radium Institute; command specialist in dermatology, Northern Command, 1940-1941. During the recent war was consultant in dermatology to the British army.

Dr. R. M. B. MacKenna

Dr. Corneille Heymans, professor of pharmacology, University of Ghent, Belgium; Nobel Prize Winner in Medicine in 1938 for his studies on physiology and pharmacology of respiration and circulation; member of the Council of Foods National de la Recherche Scientifique de Belgique; formerly lectured at New York University, Harvard Medical School, Western Reserve University School of Medicine and at the Greensfelder Memorial Foundation, Chicago. Author of Le sinus carotidien and many other works.

Dr. John McMichael, professor of medicine, University of London, and director, department of medicine, British Postgraduate Medical School; published numerous papers on splenic anemia and related subjects; formerly lecturer in physiology, University of Edinburgh; conducted clinical research on cardiac output in health and disease; as Johnston Lawrence Research fellow of the Royal Society has conducted research on hemorrhage and shock; cooperated with the Harvard Red Cross Unit at Salisbury in investigating hepatitis following the inoculation of convalescent mumps serum.

Dr. Corneille Heymans

Dr. George Ewart Martin, surgeon of the ear, nose and throat department, Royal Infirmary, Edinburgh, Scotland; lecturer in diseases of the larynx, ear and nose, Edinburgh University; member of the President's Council of the Royal College of Surgeons, Edinburgh, and of the Council of the British Otolaryngological Association; immediate past president of the laryngologic section, Royal Society of Medicine, London; during the war was adviser in otolaryngology to the Scotland Department of Health; joint author of Turner's Diseases of the Nose, Throat and Ear.

Dr. Robert Debré, professor of the Children's Clinic at the Faculty of Paris, France, and chief physician, Hospital for Diseases of Children; member of the Medical Academy and of the Royal Society of Medicine in London; corresponding Member of the British Pediatric Association; president of the French Association of Pediatry; consultant to the State Department of Health; member of the assembly of the Pasteur Institute; a co-worker of Calmette, Roux, Maurice Nicolle and Leon Bernard and a pupil of Marfan; served in both world wars and now is Commander of the Legion of Honor.

Dr. John McMichael

Dr. Göran Liljestrand, since 1918 secretary of the Nobel Committee for Physiology and Medicine and professor of pharmacology, Kolinska Institutet, Stockholm, Sweden, and assistant professor in physiology; studied in London, Belgium, Denmark and Germany; immediate past president of the Swedish Medical Association; member of the Swedish Academy

of Science and of various scientific societies in other countries; lectured in Boston.

Dr. George White Pickering, professor of medicine and director of the Medical Clinic, St. Mary's Hospital, London, England; formerly assistant to Sir Thomas Lewis and lecturer in cardiovascular pathology at the University College Hospital; member of the Medical Research Council; conducted research with Lewis on Raynaud's disease and independently on hypertension and vasomotor tone; now working on peptic ulcer and hypertension. Member of the Committee on Wound Shock of the Medical Research Council. Since 1945 editor of "Clinical Science."

Dr. George E. Martin

Sir Howard Walter Florey, professor of pathology, University of Oxford, England; honorary consultant in pathology to the British army in 1943; visiting professor to Australia and New Zealand in 1944; Nobel Prize Winner in Physiology and Medicine in 1945 for his work on penicillin; awarded the Lister Medal, the Cameron Prize of the University of Edinburgh and the Berzelius Medal of the Swedish Medical Society and numerous other honors by scientific societies and various universities.

Dr. Robert Dubré

Sir Stewart Duke-Elder, brigadier, R. A. M. C.; surgeon oculist to the King; consulting ophthalmic surgeon to the British army; ophthalmic surgeon, St. George's Hospital, London; lecturer in ophthalmology, St. George's Hospital Medical School, University of London; William Mackenzie Memorial Medalist (Glasgow) 1929; Howe lecturer in ophthalmology, Harvard Medical School, Boston, in 1930; examiner in ophthalmology for the Royal College of Physicians and Surgeons 1932-1935; author of a textbook of ophthalmology.

Dr. Herbert John Seddon, professor of orthopedic surgery, University of Oxford, England; clinical director, Wingfield Morris Orthopedic Hospital, Oxford; instructor in surgery at the hospital of the University of Michigan, Ann Arbor, Mich., in 1930; honorary secretary, British Orthopedic Association; awarded the Robert Jones medal and Association prize, 1933; Hunterian professor, Royal College of Surgeons, 1935; member, Central Council for the Care of Cripples.

Dr. Göran Liljestrand

Dr. Gonzalo Esguerra Gomez, for many years manager of the Marly Clinic, Bogota, Colombia, and on the Faculty of Medicine of the University of Colombia; formerly director, radiologic laboratory, San Juan de Dios Hospital, Bogota; professor of radiology, National School of Dentistry; formerly president of the Sociedad de Medicina Tropica and delegate to the fifth International Radiology Congress in Chicago, 1937; member of the Academia Nacional de Medicina; author of numerous works in the field of radiology.

Dr. Thierry Alajouanine, Paris, France, now professor of the history of medicine at the University of Paris; will succeed to the chair of neurology at the university on July 1, when Professor Guillain retires; interned in the service of Dr. Souques at the university; became assistant professor under Professor Guillain; attending neurologist to the Bicêtre, a large hospital for chronically ill men. Author of many books and fundamental articles on various phases of clinical neurology; will address the Section on Nervous and Mental Diseases.

Dr. George W. Pickering

Dr. E. Asworth Underwood, London, England, director, Wellcome Historical Medical Museum; formerly resident surgeon and resident physician, Western Infirmary, Glasgow; author of "Manual of Tuberculosis," second edition, 1937, and numerous articles.

Dr. Jose Valls, Buenos Aires, Argentina, professor of orthopedic surgery, University of Buenos Aires, and president of the Argentine Medical Association, will address the Section on Orthopedic Surgery on "The Aspiration Biopsy in the Diagnosis of the Lesions of the Vertebral Bodies."

Sir Howard W. Florey

Dr. Francisco deP. Miranda, director of the National Institute of Nutrition, Mexico City, Mexico; head of the Hospital del Niño; a guest of the American Medical Association on previous occasions; will address the Section on General Practice of Medicine.

Dr. Andrew Rennie Hunter of the Manchester Royal Infirmary, Manchester, England; senior resident and anesthetist, Royal Infirmary, Falkirk; formerly senior house officer, Gleneagles Hospital, Department of Health, Scotland; will address the Section on Anesthesiology.

Dr. Ernst James Heyman, professor of obstetrics and gynecology at the Caroline Institute in Stockholm, Sweden; present physician for the division of gynecology at the Radium Institute in Stockholm; head physician at the Radium Institute since 1937. Editor of the annual report issued by the League of Nations on the results of radiotherapy in uterine cancer.

Sir Stewart Duke-Elder

Dr. Donald Y. Solandt, Toronto, Canada; professor of physiologic hygiene, University of Toronto, and professor of physiology in charge of the section of biophysics; formerly associate professor of physiology; for many years conducted research in physiology and biophysical research also at the University of Pennsylvania and at the University of London; member of various committees of the National Research Council of Canada; served on active duty, also at sea, as surgeon commander, Royal Canadian Navy Reserve, during World War II.

Dr. Donald Y. Solandt

Dr. Hector Ducci, Santiago, Chile, assistant professor of medicine, University of Chile Medical School; in charge of the section of hepatology of Dr. Herman Messandi's medical service at Hospital Salvador, Santiago; general secretary of the Medical Society of Santiago; formerly assistant in bacteriology and assistant in medicine; formerly Rockefeller fellow at the University of Minnesota Hospitals, Department of Internal Medicine; will address the Section on Internal Medicine.

Dr. Frank S. Patch, Montreal, Canada; formerly president of the Canadian Medical Association and of the Royal College of Physicians and Surgeons of Canada; on the consulting staff of Montreal General Hospital; for many years professor of urology and chairman of the departments of surgery and urology, Magill University, Montreal; formerly managing editor, *Canadian Medical Association Journal;* president of the Montreal Medico-Chirurgical Society; colonel, Canadian Army Medical Corps, in World War I; author of numerous articles in the field of urology.

Dr. Hector Ducci

Dr. Sven Forssman, professor and head of the department of industrial hygiene, National Institute of Public Health, Stockholm, Sweden; editor of the *Scandinavian Journal of Hygiene;* secretary of the Swedish Medical Society; vice chairman, Swedish Association of Industrial Physicians.

REPRESENTATIVES OF FOREIGN MEDICAL ASSOCIATIONS

The following representatives of foreign governments or medical associations will attend the Centennial Celebration:

Dr. George Constam of the Federation des Médecins Suisses, Zurich, Switzerland, will be the official representative of that organization to the Centennial Session.

Dr. Szeming Sze

Dr. Harry Guy Dain, London, England, chairman of the council of the British Medical Association; member of the Royal College of Surgeons; formerly resident surgeon officer and resident medical officer of Children's Hospital, Birmingham; assistant surgeon, General Hospital, Birmingham.

Dr. John A. Pridham, London, England, chairman, International Relations Committee of the British Medical Association; member of the Royal College of Surgeons; honorary secretary, Dorset Local Medical and Panel Committee; author of "Problem of the Care of the Neurotic Patient."

Dr. Szeming Sze, formerly secretary-general of the Chinese Medical Association, and editor of the *Chinese Medical Journal*; assistant superintendent, Chungshan Hospital, Shanghai; senior technical expert, National Health Administration; adviser, Commission on Medical Education of China; vice president, Interim Commission of World Health Organization; director, National Anti-Tuberculosis Association and of the Health League of China; at present medical director, Chinese Supply Commission, Washington, D. C.

Dr. T. C. Routley

Dr. Thomas Clarence Routley, General Secretary, Canadian Medical Association; former secretary of the Ontario Medical Association for many years; Fellow of the Royal College of Physicians and Surgeons of Canada; Commander of the Order of the British Empire; member of the Toronto Academy of medicine and of the Alpha Omega Alpha Horonary Medical Fraternity; for four years served as general secretary of the Canadian Medical Procurement and Assignment Board.

Dr. Chafic Trefi, a graduate in medicine of the University of Paris; formerly surgeon in Iraq hospitals and in Syrian public health hospitals; represented the Syrian government in the special meeting of the United Nations in 1946 when the charter of the World Health Organization was drawn up; at present in the United States for training in surgical technic and serving as assistant in the surgical service, Presbyterian Hospital of Columbia University, New York.

Dr. Chafic Trefi

Dr. Charles Hill, secretary of the British Medical Association; formerly extension lecturer in biology, University of London, England; clinical assistant, Children's Department, London Hospital; author of "What Is Osteopathy?" (jointly) and recent legislation in medical practice.

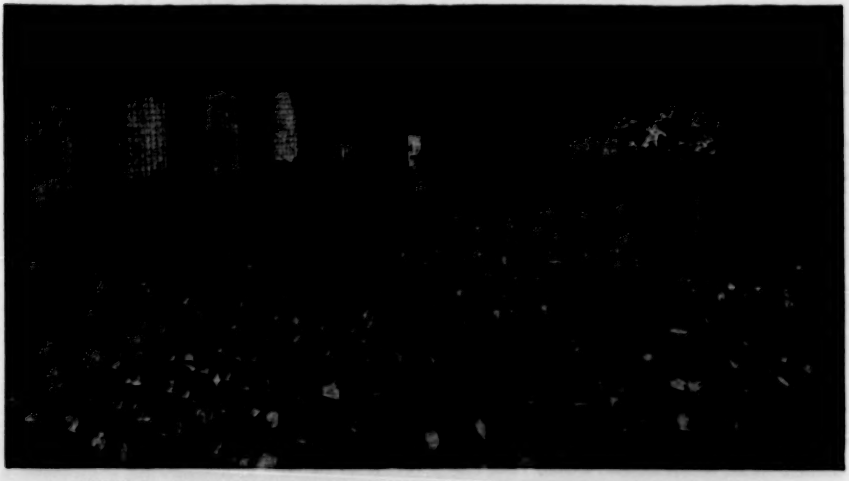
Dr. Hugh Anthony Clegg, editor of the *British Medical Journal*, formerly house physician at St. Bartholomew's Hospital, London, and at Brompton Hospital for diseases of the chest; medical registrar, Charing Cross Hospital; assistant medical officer, London County Council; author of "What Is Osteopathy?" (jointly), Wartime Health and Democracy, Nineteenth Century, Life and Letters and other works.

Dr. Francisco de P. Miranda

Dr. Charles Huritz, representing the Medical Association of South Africa.

Dr. A. Torab Mehra, representing the government of Iran.

Dr. Salvador Zubiran, president of the National Academy of Medicine of Mexico, and Drs. Manuel Guevara Oropesa, Donato G. Alarcon, Jose Rabago, Miguel Jimenez y Sanchez and Francisco de P. Miranda, representing the National Academy of Mexico. Dr. Miranda is also an invited guest of the Section on General Practice.



INTERIOR OF THE AUDITORIUM. SCENE OF THE OPENING MEETING AND THE RECEPTION TO THE PRESIDENT.

PRELIMINARY PROGRAM OF THE SCIENTIFIC ASSEMBLY

RELIGIOUS SERVICES

Sunday, June 8—11 a. m.

BALLROOM, CONVENTION HALL

REV. RALPH COOPER HUTCHISON.
RABBI JOSHUA L. LIEBMAN.
MONSIGNOR FULTON J. SHEEN.

GENERAL SCIENTIFIC MEETINGS

Ballroom, Convention Hall

MONDAY, JUNE 9—2 P. M.

CLYDE L. CUMMER, Cleveland, Presiding

The Antihistamine Drugs. GEORGE L. WALDBOTT, Detroit.
The Emergency Treatment of Vascular Occlusions. EDGAR V. ALLEN, Rochester, Minn.
Significant Trends in Cancer Research. STANLEY P. REIMANN, Philadelphia.
Address of Invited Foreign Guest: Hypertensive Encephalopathy. GEORGE W. PICKERING, London, England.
Intermission.

3:30 P. M.

HENRY R. VIETS, Boston, Presiding

Panel Discussion on The Modern Management of Heart Disease. PAUL D. WHITE, Boston, Moderator
Diuretics. ARTHUR C. DE GRAFF, New York.
Digitalis. HARRY GOLD, New York.
Quinidine. LOUIS N. KATZ, Chicago.
GEORGE W. PICKERING, London, England.
Question and Answer Period.

5 P. M.

General Summary. PAUL D. WHITE, Boston.

TUESDAY, JUNE 10—9 A. M.

CLYDE L. CUMMER, Cleveland, Presiding

The Obstructive Prostate. FRANK HINMAN, San Francisco.
Psychosomatics: The Liaison Between Internal Medicine and Psychiatry. EDWARD A. STRECKER, Philadelphia.
Poliomyelitis. HART E. VAN RIPER, New York.
Address of Invited Foreign Guest: Nerve Grafting in the Limbs. HERBERT JOHN SEDDON, Oxford, England.
Intermission.

10:30 A. M.

CHARLES H. PHIFER, Chicago, Presiding

Panel Discussion on Emergency Surgery

R. ARNOLD GRISWOLD, Louisville, Ky., Moderator

Head Injuries. BARNES WOODHALL, Durham, N. C.
Chest Injuries. BRIAN B. BLADES, Washington, D. C.
Abdominal Injuries. PAT R. IMES, Louisville, Ky.
Extremities. MATHER CLEVELAND, New York.
HERBERT JOHN SEDDON, Oxford, England.
Question and Answer Period.

12 M.

General Summary. R. ARNOLD GRISWOLD, Louisville, Ky.
Intermission

2 P. M.

L. W. LARSON, Bismarck, N. D., Presiding

Skin Problems of the Elderly. OLIVER S. ORMSBY, Chicago.
Cancer of the Uterus. EMIL NOVAK, Baltimore.
Radioactive Products in Medicine. STAFFORD WARREN, Los Angeles.
New Antibiotic Agents. HOWARD FLOREY, Oxford, England.
Intermission.

3:30 P. M.

CLYDE L. CUMMER, Cleveland, Presiding

Panel Discussion on Antibiotic Therapy

WESLEY W. SPINK, Minneapolis, Moderator

Streptomycin. CHESTER S. KEEFER, Boston.
Chemotherapy in Surgery. JOHN S. LOCKWOOD, New York.
Development of Bacterial Resistance to Antibiotics. CHARLES PHILLIP MILLER, Chicago.
HOWARD FLOREY, Oxford, England.
Question and Answer Period.

5 P. M.

General Summary. WESLEY W. SPINK, Minneapolis.

THE GENERAL MEETING

Ballroom, Convention Hall

TUESDAY, June 10—8:00 P. M.

Music by the Philadelphia Festival Orchestra, conducted by Alexander Hilsberg, which will present a program, as follows:

Alexander Hilsberg

Sibelius .....Finlandia
Mendelssohn ....Midsummer Night's Dream
Scherzo
Nocturne
Paganini .....Moto Perpetuo
McDonald ..Legend of the Arkansas Traveler
Intermission
Glinka ....Overture: Russlan and Ludmilla
Ippolitow-Ivanov .....In the Village, From Caucasian Sketches
Tschaikovsky .....Romeo and Juliet

THE PROGRAMS OF THE SECTIONS

Outline of the Scientific Proceedings—The Preliminary Program and the Official Program

The following papers are announced to be read before the various sections. The order here is not necessarily the order that will be followed in the Official Program, nor is the list complete. The Official Program will be similar to the programs issued in previous years and will contain the final program of each section with abstracts of the papers, as well as lists of committees, program of the General Meeting, list of entertainments and other information. To prevent misunderstandings and protect the interest of advertisers, it is here announced that this Official Program will contain no advertisements. It is copyrighted by the American Medical Association and will not be distributed before the session. A copy will be given to each Fellow on registration.

SECTION ON INTERNAL MEDICINE

MEETS IN BALLROOM, CONVENTION HALL

OFFICERS OF SECTION

Chairman—Joseph T. Wearn, Cleveland.

Vice Chairman—Roy H. Turner, New Orleans.

Secretary—Cecil J. Watson, Minneapolis.

Executive Committee—Burrell O. Raulston, Los Angeles; William D. Stroud, Philadelphia; Joseph T. Wearn, Cleveland.

Wednesday, June 11—9 a. m.

The Clinical Syndrome of Cardiac Pain Intermediate Between Angina Pectoris and Acute Myocardial Infarction, i. e. "Coronary Failure" (Lantern Demonstration).
A. Stone Freedburg, Herrman L. Blumgart, Paul M. Zoll and Monroe J. Schlesinger, Boston.

Discussion to be opened by Arthur M. Master, New York; W. D. Stroud, Philadelphia, and Robert L. Levy, New York.

The Cardiovascular System as the Effector Organ in Psychosomatic Phenomena.
George E. Burch and Clarence Thorpe Ray, New Orleans.

Discussion to be opened by George A. Wolf Jr., New York, and Mandel E. Cohen, Boston.

The Frank Billings Lecture: Frank Billings, Physician, Teacher and Citizen. Ernest E. Irons, Chicago.

Recent Investigations on the Etiology and Treatment of Hypertension (Lantern Demonstration).
Richard H. Lyons, Syracuse, N. Y.

Discussion to be opened by K. G. Kohlstaedt, Indianapolis.

An Appraisal of the Modern and Surgical Methods of Treating Peptic Ulcer (Lantern Demonstration).
Russell S. Boles, Philadelphia.

Discussion to be opened by Walter L. Palmer, Chicago, and Frank H. Lahey, Boston.

Thursday, June 12—9 a.m.

Election of Officers

The Diagnosis and Treatment of Bulbar Poliomyelitis (Lantern Demonstration). A. B. Baker, Minneapolis.
Discussion to be opened by John R. Paul, New Haven, Conn., and Hart E. van Riper, New York.

Streptomycin in the Treatment of Tuberculosis in Human Beings (Lantern Demonstration).
Walsh McDermott, Carl Muschenheim and Susan J. Hadley, New York.

Discussion to be opened by J. Burns Amberson, New York, and John B. Barnwell, Washington, D. C.

Chairman's Address: A Challenge of Functional Disease.
Joseph T. Wearn, Cleveland.

The Use of Urethane in the Treatment of Leukemia (Lantern Demonstration).
John S. Hirschboeck, M. C. F. Lindert, Thomas L. Calvy and Jules Chase, Milwaukee.

Discussion to be opened by Claude E. Forkner, New York, and Leon O. Jacobson, Chicago.

The Mechanism and Management of the Hemorrhagic Tendency of Congestive Splenomegaly (Lantern Demonstration).
Leandro M. Tocantins, Philadelphia.

Discussion to be opened by William Dameshek, Boston, and Cecil O. Patterson, Dallas, Texas.

Concentrated Vitamin D for Rheumatism: Toxic Reactions Simulating Hyperparathyroidism (Lantern Demonstration). C. H. Slocumb, Rochester, Minn.

Discussion to be opened by Richard H. Freyberg, New York, and Smith Freeman, Chicago.

Friday, June 13—9 a. m.

JOINT MEETING WITH SECTION ON EXPERIMENTAL MEDICINE AND THERAPEUTICS

Address of Invited Foreign Guest, Section on Internal Medicine: The Contribution of the Laboratory to the Differential Diagnosis of Jaundice.
Hector Ducci Claro, Santiago, Chile.

Centennial Address of Section on Internal Medicine: History of Internal Medicine in the United States (Lantern Demonstration). Reginald Fitz, Boston.

PANEL DISCUSSION ON RECENT ADVANCES IN TREATMENT

Morris Fishbein, Moderator

Virus Diseases. Thomas M. Rivers, New York.

Gastrointestinal Diseases (Lantern Demonstration).
Henry L. Bockus, Philadelphia.

Cardiovascular Diseases. Arlie R. Barnes, Rochester, Minn.

Cancer. Cornelius P. Rhoads, New York.

Blood Diseases. Russell L. Haden, Cleveland.

Infectious Diseases (Lantern Demonstration).
Chester S. Keefer, Boston.

Pulmonary Disease. James J. Waring, Denver.

Endocrinology (Lantern Demonstration).
Willard O. Thompson, Chicago.

SECTION ON SURGERY, GENERAL AND ABDOMINAL

MEETS IN WESTMINSTER HALL, CHELSEA HOTEL

OFFICERS OF SECTION

Chairman—Alton Ochsner, New Orleans.

Vice Chairman—John B. Flick, Philadelphia.

Secretary—Michael E. DeBakey, New Orleans.

Executive Committee—Frederick A. Coller, Ann Arbor, Mich.; Daniel C. Elkin, Atlanta, Ga.; Alton Ochsner, New Orleans.

Wednesday, June 11—2 p. m.

Address of Invited Foreign Guest: Gastric Surgery After One Hundred Years. Heneage Ogilvie, London, England.

Chairman's Address: Carcinoma of the Lung (Lantern Demonstration). Alton Ochsner, New Orleans.

Transthoracic Resection of the Esophagus and Cardiac End of the Stomach for Carcinoma: An Analysis of the Postoperative Complications, Causes of Death and Late Results of Operation (Lantern Demonstration).
Richard H. Sweet, Boston.

Discussion to be opened by B. Noland Carter, Cincinnati; Dallas B. Phemister, Chicago, and John H. Garlock, New York.

The Problem of Gastric Cancer (Lantern Demonstration).
Owen H. Wangensteen, Minneapolis

Discussion to be opened by George T. Pack, New York, and Waltman Walters, Rochester, Minn.

Radical Resection of the Head and Total Pancreatectomy for Benign and Malignant Lesions of the Pancreas (Lantern Demonstration). John M. Waugh, Rochester, Minn.

Discussion to be opened by Allen O. Whipple, New York, and Richard B. Cattell, Boston.

Surgical Management of Carcinoma of the Colon and Large Bowel (Lantern Demonstration).
Fred W. Rankin and Coleman C. Johnston, Lexington, Ky.

Discussion to be opened by Thomas E. Jones, Cleveland, and Leland S. McKittrick, Boston.

Thursday, June 12—2 p. m.

Election of Officers

Centennial Address: A Century of American Surgery.
EVARTS A. GRAHAM, St. Louis.

Protein Nitrogen Retention Following Injury.
SIDNEY C. MADDEN, Atlanta, Ga.
Discussion to be opened by WILLIAM PARSON, New Orleans.

The Problem of Amino Acid Utilization in the Surgical Patient (Lantern Demonstration). PAUL R. CANNON, Chicago.
Discussion to be opened by ROBERT ELMAN, St. Louis.

Management of Protein Deficiency in Surgical Patients: Use of Whole Blood Transfusion (Lantern Demonstration).
CHAMP LYONS, New Orleans.
Discussion to be opened by EVERETT I. EVANS, Richmond, Va., and HYMAN S. MAYERSON, New Orleans.

Management of Protein Deficiency in Surgical Patients: Use of Intravenous and Intrajejunal Injections (Lantern Demonstration). JOHN D. STEWART, Buffalo.
Discussion to be opened by ARTHUR W. ALLEN, Boston, and I. S. RAVDIN, Philadelphia.

Nutritional Problems of Substandard Risk Patients.
RICHARD L. VARCO, Minneapolis.
Discussion to be opened by DONALD D. KOZOLL, Chicago.

Friday, June 13—2 p. m.

JOINT MEETING WITH SECTION ON GASTRO-ENTEROLOGY AND PROCTOLOGY

SYMPOSIUM ON PEPTIC ULCER

Statistical Study of Over 1,000 Cases of Peptic Ulcer (Lantern Demonstration). MAURICE FELDMAN, Baltimore.

Onset of Peptic Ulcer in the Aged (Lantern Demonstration).
HENRY A. RAFSKY, MICHAEL WEINGARTEN and CHARLES I. KRIEGER, New York.

Nocturnal Gastric Secretion in Normal Individuals and in Peptic Ulcer (Lantern Demonstration). ERVIN LEVIN, Chicago.

Therapeutic Agents:

Effect of Enterogastrone in Patients with Gastric and Duodenal Ulcer (Lantern Demonstration).
H. M. POLLARD and WILLIAM H. BACHRACH, Ann Arbor, Mich.

Aluminum Hydroxide Mixture with Mucin in the Treatment of Peptic Ulcer (Lantern Demonstration).
LEO L. HARDT, Chicago.

Synthetic Resin: A New Antacid for Treatment in Peptic Ulcer (Lantern Demonstration).
MANFRED KRAEMER and LEO H. SIEGEL, Newark, N. J.

Discussion on papers of DR. FELDMAN, DRS. RAFSKY, WEINGARTEN and KRIEGER, DR. LEVIN, DRS. POLLARD and BACHRACH, DR. HARDT and DRS. KRAEMER and SIEGEL to be opened by DRS. A. C. IVY and LESTER R. DRAGSTEDT, Chicago; SARA M. JORDAN, Boston; RALPH COLP, New York; WALTER L. PALMER, Chicago, and ASHER WINKELSTEIN, New York.

Favorable and Unfavorable Results of Vagus Nerve Resections in the Treatment of Peptic Ulcer: An Anatomic, Physiologic and Clinical Study (Lantern and Motion Picture Demonstration).
WALTMAN WALTERS, Rochester, Minn.
Discussion to be opened by LESTER R. DRAGSTEDT, Chicago; RALPH COLP, New York, and KEITH S. GRIMSON, Durham, N. C.

Results of Surgical Treatment for Gastric Ulcer (Lantern Demonstration).
SAMUEL F. MARSHALL, Boston, and MARK L. WELCH, Dallas, Texas.
Discussion to be opened by HARVEY B. STONE, Baltimore, and J. WILLIAM HINTON, New York.

Complications of Peptic Ulcer (Lantern Demonstration).
HAROLD L. THOMPSON, Los Angeles.
Discussion to be opened by ARTHUR W. ALLEN, Boston.

SECTION ON OBSTETRICS AND GYNECOLOGY

MEETS IN WESTMINSTER HALL, CHELSEA HOTEL

OFFICERS OF SECTION

Chairman—ALICE F. MAXWELL, San Francisco.
Vice Chairman—ROBERT J. CROSSEN, St. Louis.
Secretary—WILLIAM F. MENGERT, Dallas, Texas.
Executive Committee—LOUIS E. PHANEUF, Boston; PHILIP F. WILLIAMS, Philadelphia; ALICE F. MAXWELL, San Francisco.

Wednesday, June 11—9 a. m.

Centennial Address. E. A. SCHUMANN, Philadelphia.

Cervical Cytology in the Diagnosis of Early Cancer.
J. ERNEST AYRE, Montreal, Canada.
Discussion to be opened by CHARLES E. GALLOWAY, Evanston, Ill.

Ectopic Pregnancy (Lantern Demonstration).
W. D. BEACHAM, New Orleans.

PANEL DISCUSSION ON GYNECOLOGIC BLEEDING

A. H. CURTIS, Chicago, Chairman.

Physiologic Basis (Lantern Demonstration).
S. R. M. REYNOLDS, Baltimore.

Adolescent Bleeding (Lantern Demonstration).
C. F. FLUHMANN, San Francisco.

Functional Bleeding. A. H. CURTIS, Chicago.

Menopausal Bleeding. J. P. PRATT, Detroit.

Thursday, June 12—9 a. m.

Election of Officers

Chairman's Address: A Medical Inventory.
ALICE F. MAXWELL, San Francisco.

Effect of Pregnancy on Experimental Renal Hypertension (Lantern Demonstration). ARTHUR GROLLMAN, Dallas, Texas.

Artificial Vaginas (Motion Picture Demonstration).
V. S. COUNSELLER, Rochester, Minn.
Discussion to be opened by F. H. Falls, Chicago.

PANEL DISCUSSION ON THERAPEUTIC ABORTION

S. A. COSGROVE, Jersey City, N. J., Chairman.

Internist. H. M. KORNS, Dubuque, Iowa.

Surgeon. S. C. HARVEY, New Haven, Conn.

Neuropsychiatrist. F. G. EBAUGH, Denver.

Obstetrician (Lantern Demonstration).
S. A. COSGROVE, Jersey City, N. J.

Friday, June 13—9 a. m.

Address of Invited Foreign Guest.
J. HEYMAN, Stockholm, Sweden.

Cesarean Section at General Hospital of Mexico City (Lantern Demonstration). JOSE RABAGO, Mexico City, Mexico.

Cesarean Hysterectomy (Lantern Demonstration).
WILLIAM J. DIECKMANN, Chicago.
Discussion on papers of DRS. RABAGO and DIECKMANN to be opened by NICHOLSON J. EASTMAN, Baltimore.

PANEL DISCUSSION ON PROBLEMS OF DELIVERY

PHILIP F. WILLIAMS, Philadelphia, Chairman.

Hemorrhage. C. A. GORDON, Brooklyn.

Abnormal Presentation (Lantern Demonstration).
H. HUDNALL WARE JR., Richmond, Va.

SECTION ON OPHTHALMOLOGY

MEETS IN EMBASSY SALON, AMBASSADOR HOTEL

OFFICERS OF SECTION

Chairman—DERRICK VAIL, Chicago.

Vice Chairman—WARREN D. HORNER, San Francisco.

Secretary—ROBERT J. MASTERS, Indianapolis.

Executive Committee—CONRAD BERENS, New York; FREDERICK C. CORDES, San Francisco; DERRICK VAIL, Chicago.

Wednesday, June 11—2 p. m.

Chairman's Address. DERRICK VAIL, Chicago.

Address of Invited Foreign Guest.
STEWART DUKE-ELDER, London, England.

Centennial Address. FREDERICK H. VERHOEFF, Boston.

Keratitis Associated with Lymphogranuloma Venereum (Lantern Demonstration).
HAROLD G. SCHEIE, Philadelphia; ALAN S. CRANDALL, Salt Lake City, and WERNER HENLE, Philadelphia.
Discussion to be opened by JOHN P. MACNIE, New York, and GARRETT L. SULLIVAN, Boston.

A Five Year Follow-Up of 300 Glaucomatous Eyes (Lantern Demonstration).
PETER C. KRONFELD, Chicago, and ISABELLE MCGARRY, Evanston, Ill.
Discussion to be opened by ALGERNON B. REESE, New York, and M. ELLIOTT RANDOLPH, Baltimore.

Thursday, June 12—2 p. m.

Executive Session

Election of Officers

The Significance of the Ligament of Lockwood in Relation to Surgery of the Inferior Oblique Muscle (Lantern Demonstration). WALTER H. FINK, Minneapolis.
Discussion to be opened by MAYNARD C. WHEELER, New York.

Streptomycin in Ocular Infections (Lantern Demonstration).
JOHN G. BELLOWS and CHESTER J. FARMER, Chicago.
Discussion to be opened by PARKER HEATH, Detroit, and IRVING H. LEOPOLD, Philadelphia.

Unilateral Syphilitic Optic Atrophy (Lantern Demonstration).
WALTER L. BRUETSCH, Indianapolis.
Discussion to be opened by CECIL S. O'BRIEN, Iowa City, and JOSEPH V. KLAUDER, Philadelphia.

Sodium Sulfacetimide 30 per Cent in Ophthalmology.
LEO L. MAYER, St. Louis.
Discussion to be opened by PHILLIPS THYGESON, San Jose, Calif., and EUGENE W. ANTHONY, Fulton, N. Y.

Demonstration of New Instruments

Friday, June 13—2 p. m.

Congenital Impatency of the Nasolacrimal Duct (Lantern Demonstration).
EDWIN L. KENDIG JR. and DUPONT GUERRY III, Richmond, Va.
Discussion to be opened by J. V. CASSADY, South Bend, Ind., and JOHN H. DUNNINGTON, New York.

Intraocular Foreign Bodies: Wartime Experiences Applied to a Peacetime Problem. GEORGE M. HAIK, New Orleans.
Discussion to be opened by JOHN S. MCGAVIC, Bryn Mawr, Pa., and FRANK W. NEWELL, Chicago.

Military Ophthalmology in the European Theater (Lantern Demonstration). DON MARSHALL, Kalamazoo, Mich.
Discussion to be opened by F. PHINIZY CALHOUN JR., Atlanta, Ga., and TRYGVE GUNDERSON, Boston.

Eyelid Reconstruction in the Blinded (Lantern Demonstration).
S. M. DUPERTUIS, Pittsburgh.
Discussion to be opened by NORMAN L. CUTLER, Wilmington, Del., and FRANK MCDOWELL, St. Louis.

Surgical Treatment of Congenital Cataract (Lantern Demonstration).
WILLIAM C. OWENS, Baltimore, and WILLIAM F. HUGHES JR., Indianapolis.
Discussion to be opened by FREDERICK C. CORDES, San Francisco, and EDWARD C. ELLETT, Memphis, Tenn.

SECTION ON LARYNGOLOGY, OTOLOGY AND RHINOLOGY

MEETS IN EMBASSY SALON, AMBASSADOR HOTEL

OFFICERS OF SECTION

Chairman—J. MACKENZIE BROWN, Los Angeles.

Vice Chairman—CARL H. MCCASKEY, Indianapolis.

Secretary—FLETCHER D. WOODWARD, Charlottesville, Va.

Executive Committee—CLAUDE C. CODY, Houston, Texas; LOUIS H. CLERF, Philadelphia; J. MACKENZIE BROWN, Los Angeles.

Wednesday, June 11—9 a. m.

Progress in Bronchology. LOUIS H. CLERF, Philadelphia.
Discussion to be opened by H. B. ORTON, Newark, N. J., and H. J. MOERSCH, Rochester, Minn.

Progress in Esophagology (Lantern Demonstration).
PAUL H. HOLINGER, Chicago.
Discussion to be opened by FLETCHER D. WOODWARD, Charlottesville, Va., and JEROME R. HEAD, Chicago.

Traumatic Injuries of the Larynx, Especially Gunshot Wounds and Their Repair. MERCER G. LYNCH, New Orleans.
Discussion to be opened by JOSEPH BUCHIGNANI, Memphis, Tenn., and J. WADE YOUNGBLOOD, Dallas, Texas.

Some Technical Procedures in the Treatment of the Cleft Lip and Palate (Lantern Demonstration).
FRED Z. HAVENS, Rochester, Minn.
Discussion to be opened by HAROLD S. VAUGHAN, New York, and ROBERT H. IVY, Philadelphia.

Malignant Growths of the Sinuses (Lantern Demonstration).
LEROY A. SCHALL, Boston.
Discussion to be opened by HENRY B. ORTON, Newark, N. J., and C. STEWART NASH, Rochester, N. Y.

Thursday, June 12—9 a. m.

Executive Session

Election of Officers

Chairman's Address: The Future of Otolaryngology.
J. MACKENZIE BROWN, Los Angeles.

Address of Invited Foreign Guest.
G. EWART MARTIN, Edinburgh, Scotland.

Centennial Address: A Brief History of Otolaryngology in the United States, 1847-1947.
RALPH A. FENTON, Portland, Ore.

Neck Surgery in Otolaryngology (Lantern Demonstration).
CARL H. MCCASKEY, Indianapolis.
Discussion to be opened by AUGUST L. BECK, New Rochelle, N. Y., and JOSEPH D. KELLY, New York.

Lymphatics of the Head and Neck (Lantern and Motion Picture Demonstration). OSCAR V. BATSON, Philadelphia.
Discussion to be opened by B. P. WIDMANN, Philadelphia, and HAYES E. MARTIN, New York.

Friday, June 13—9 a. m.

Surgery of the Seventh Nerve. THOMAS G. TICKLE, New York.
Discussion to be opened by FRANK D. LATHROP, Boston, and JOSEPH A. SULLIVAN, Toronto, Canada.

Diseases of the Salivary Glands (Lantern Demonstration).
A. C. FURSTENBURG, Ann Arbor, Mich.
Discussion to be opened by DEAN M. LIERLE, Iowa City, and LEROY A. SCHALL, Boston.

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The Lempert Fenestra Nov-Ovalis Operation for the Restoration of Practical and Serviceable Unaided Hearing (Lantern Demonstration). JULIUS LEMPERT, New York.

Discussion to be opened by MARVIN F. JONES, New York, and PHILIP E. MELTZER, Boston.

PANEL DISCUSSION ON DEAFNESS

FRANCIS L. LEDERER, Chicago, Moderator.

EDWARD H. TRUEX, Hartford, Conn.

RAYMOND CARHART, Evanston, Ill.

EVA THOMPSON, Philadelphia.

HERBERT KOEPP-BAKER, Chicago (Lantern Demonstration).

CHARLES E. KINNEY, Cleveland.

Each participant will answer three vital questions to show *what* one can do to rehabilitate the patient with a hearing impairment, and *how* one can do it.

SECTION ON PEDIATRICS

MEETS IN BALLROOM, CONVENTION HALL

OFFICERS OF SECTION

Chairman—GILBERT J. LEVY, Memphis, Tenn.

Vice Chairman—CHARLES A. WEYMULLER, Brooklyn.

Secretary—MARGARET MARY NICHOLSON, Washington, D. C.

Executive Committee—HUGH L. DWYER, Kansas City, Mo.; JOHN AIKMAN, Rochester, N. Y.; GILBERT J. LEVY, Memphis, Tenn.

Wednesday, June 11—2 p. m.

An Analysis of Newborn Mortality and Morbidity, with Controls in New York, Philadelphia and Memphis, with Continuous Caudal Analgesia (Lantern Demonstration). ROBERT A. HINGSON, FRANK E. WHITACRE and H. CHARLES FRANKLIN, Memphis, Tenn.

Discussion to be opened by JAMES G. HUGHES, Memphis, Tenn., and GEORGE J. ANDROS, Chicago.

Medical Management of Whooping Cough in Infants (Lantern Demonstration). JEROME L. KOHN and ALFRED E. FISCHER, New York.

Discussion to be opened by RUTH G. ALEMAN, New Orleans, and L. NELLIS SILVERTHORNE, Toronto, Canada.

Cerebral Complications in Pertussis (Lantern Demonstration). ABRAHAM M. LITVAK and HARRY GIBEL, Brooklyn.

Discussion to be opened by BENJAMIN KRAMER and PHILIP ROSENBLATT, Brooklyn.

Encephalitis as a Causative Factor in Behavior Disorders in Children (Lantern Demonstration). J. VICTOR GREENBAUM and LOUIS A. LURIE, Cincinnati.

Discussion to be opened by CHARLES BRADLEY, East Providence, R. I., and OSCAR REISS, Los Angeles.

Electroencephalographic Studies in Acute Poliomyelitis (Lantern Demonstration). ALTON GOLDBLOOM, Montreal, Canada.

Discussion to be opened by M. G. PETERMAN, Milwaukee, and DAVID BODIAN, Baltimore.

Allergy to Milk. PRESTON A. MCLENDON and DOROTHY S. JAEGER-LEE, Washington, D. C.

Discussion to be opened by W. AMBROSE MCGEE, Richmond, Va., and WILLIAM F. MATTHEWS, Montclair, N. J.

Thursday, June 12—2 p. m.

Election of Officers

Problems in Management of Tick Typhus (Rocky Mountain Spotted Fever) in Childhood (Lantern Demonstration). WESTON M. KELSEY and GEORGE T. HARRELL JR., Winston-Salem, N. J.

Discussion to be opened by ROBERT JOSEPH HUEBNER, Kensington, Md., and DAVID M. GREELEY, New York.

Address of Invited Foreign Guest: Deleterious Results of Overdosage of Vitamin D_3 During Infancy. ROBERT DEBRÉ, Paris, France.

Centennial Address: Progress in Pediatrics. EDGAR P. COPELAND, Washington, D. C.

Congenital Atresia of the Esophagus with Tracheoesophageal Fistula (Lantern Demonstration). CAMERON HAIGHT, Ann Arbor, Mich.

Discussion to be opened by BRIAN B. BLADES, Washington, D. C., and CONRAD R. LAM, Detroit.

Psychotherapy in Pediatrics. DOROTHY DONLEY-DOWD, Washington, D. C.

Discussion to be opened by EARL H. BAXTER, Columbus, Ohio.

Causes of Death in 13,000 Admissions (Lantern Demonstration). RALPH V. PLATOU, New Orleans.

Friday, June 13—2 p. m.

Clinical Application of a Laboratory Method for the Selection of Antibiotic Therapy. ROBERT H. HIGH, EARL H. SPAULDING, AMEDEO BONDI and WALDO E. NELSON, Philadelphia.

Discussion to be opened by PAUL C. BUCY, Chicago.

Some Practical Measures for the Reduction of Morbidity and Mortality in Premature Infants (Lantern Demonstration). LEWIS A. KOCH, Brooklyn.

Discussion to be opened by ETHEL C. DUNHAM, Washington, D. C.

Rheumatic Fever in Childhood (Lantern Demonstration). WILLIAM WESTON JR., Columbia, S. C.

Discussion to be opened by IRA GORE, Washington, D. C.; STANLEY GIBSON, Chicago, and RACHEL ASH, Philadelphia.

Immunologic Studies in Mumps (Lantern Demonstration). HARRIET DAVIS, JOSEPH STOKES JR., JOHN F. ENDERS, GERTRUDE HENLE and ELIZABETH P. MARIS, Philadelphia.

Discussion to be opened by KARL HABEL, Bethesda, Md.

Lye Poisoning in Children (Lantern Demonstration). WALLACE KERNODLE, GRANT TAYLOR and WILBURT C. DAVISON, Durham, N. C.

Discussion to be opened by JOHN AIKMAN, Rochester, N. Y.

SECTION ON EXPERIMENTAL MEDICINE AND THERAPEUTICS

MEETS IN WEDGEWOOD ROOM, CHELSEA HOTEL

OFFICERS OF SECTION

Chairman—CARL A. DRAGSTEDT, Chicago.

Vice Chairman—WALTER BAUER, Boston.

Secretary—DWIGHT L. WILBUR, San Francisco.

Executive Committee—TINSLEY R. HARRISON, Dallas, Texas; E. V. ALLEN, Rochester, Minn.; CARL A. DRAGSTEDT, Chicago.

Wednesday, June 11—2 p. m.

Centennial Address: The Macrocytic Anemias. GEORGE R. MINOT, Boston.

SYMPOSIUM ON THE USE OF NEWER DRUGS

Asymetrine Hydrobromide in the Treatment of Gastroenteric Hypermotility (Lantern Demonstration). ROBERT A. WOODBURY, GEORGE P. CHILD, G. FRANK JONES JR., and RICHARD TORPIN, Augusta, Ga.

The Use of Nitrogen Mustards in the Treatment of Disease (Lantern Demonstration). LEON O. JACOBSEN, Chicago.

Stilbamidine in the Treatment of Multiple Myeloma (Lantern Demonstration). ISIDORE SNAPPER, New York.

BAL Therapy in Arsenic and Mercury Poisoning (Lantern Demonstration). JOHN LUETSCHER and WARFIELD T. LONGCOPE, Baltimore.

Use of Antihistaminic Drugs.
FRANCIS M. RACKEMANN, Boston.
Discussion to be opened by FRANKLIN A. KYSER, Evanston, Ill.

Thursday, June 12—2 p. m.

Election of Officers

Address of Invited Foreign Guest: Blood Pressure Homeostatis and Circulatory Failure (Shock) (Lantern Demonstration). C. HEYMANS, Ghent, Belgium.

Chairman's Address: Idiosyncrasy to Drugs.
CARL A. DRAGSTEDT, Chicago.

Effects of Smoking Cigarets on the Heart in Normal Persons and in Cardiac Patients (Lantern Demonstration).
ROBERT L. LEVY and JOHN L. NICKERSON, New York.
Discussion to be opened by HAROLD J. STEWART, New York; ARLIE R. BARNES, Rochester, Minn., and DAVID ADLERSBERG, New York.

The Use of Anticoagulants in the Treatment of Heart Disease.
IRVING S. WRIGHT and WILLIAM T. FOLEY, New York.
Discussion to be opened by LEO LOEWE, Brooklyn, and E. V. ALLEN, Rochester, Minn.

Preliminary Observation of the Effect of Thoracic Sympathectomy on Heart Rate (Lantern Demonstration).
EARLE M. CHAPMAN, DERA KINSEY, WILLIAM P. CHAPMAN and REGINALD H. SMITHWICK, Boston.

Friday, June 13—9 a. m.

JOINT MEETING WITH SECTION ON INTERNAL MEDICINE IN BALLROOM OF CONVENTION HALL

Address of Invited Foreign Guest, Section on Internal Medicine: The Contribution of the Laboratory to the Differential Diagnosis of Jaundice.
HECTOR DUCCI CLARO, Santiago, Chile.

Centennial Address of Section on Internal Medicine: History of Internal Medicine in the United States (Lantern Demonstration). REGINALD FITZ, Boston.

PANEL DISCUSSION ON RECENT ADVANCES IN TREATMENT

MORRIS FISHBEIN, Moderator

Virus Diseases. THOMAS M. RIVERS, New York.
Gastrointestinal Diseases (Lantern Demonstration). HENRY L. BOCKUS, Philadelphia.
Cardiovascular Diseases. ARLIE R. BARNES, Rochester, Minn.
Cancer. CORNELIUS P. RHOADS, New York.
Blood Diseases. RUSSELL L. HADEN, Cleveland.
Infectious Diseases (Lantern Demonstration). CHESTER S. KEEFER, Boston.
Pulmonary Disease. JAMES J. WARING, Denver.
Endocrinology (Lantern Demonstration). WILLARD O. THOMPSON, Chicago.

SECTION ON PATHOLOGY AND PHYSIOLOGY

MEETS IN WEDGEWOOD ROOM, CHELSEA HOTEL

OFFICERS OF SECTION

Chairman—J. J. MOORE, Chicago.
Vice Chairman—ALVIN G. FOORD, Pasadena, Calif.
Secretary—FRANK W. HARTMAN, Detroit.
Executive Committee—FRANK C. MANN, Rochester, Minn.; VIRGIL H. MOON, Philadelphia; J. J. MOORE, Chicago.

Wednesday, June 11—9 a. m.

The Present Status of the Therapy of Experimental Renal Hypertension (Lantern Demonstration).
G. E. WAKERLIN, Chicago.

Tumors of the Carotid Gland: A Review (Lantern Demonstration).
WALTER L. BIERRING and RICHARD F. BIRGE, Des Moines, Iowa.

Chairman's Address: The Practice of Pathology.
J. J. MOORE, Chicago.

Address of Invited Foreign Guest: Regulation of the Arterial Pulmonary Pressure.
GÖRAN LILJESTRAND, Stockholm, Sweden.

Centennial Address: American Giants of Pathology.
HOWARD T. KARSNER, Cleveland.

Medical Aspects of the Atomic Bomb (Lantern Demonstration).
R. H. DRAEGER, Washington, D. C.

Various Phases of the Use of Streptomycin in Tuberculosis (Lantern Demonstration). H. J. CORPER, Denver.

Thursday, June 12—9 a. m.

Election of Officers

SYMPOSIUM ON VIRUS DISEASES

The Physician and the Virus Diagnostic Laboratory (Lantern Demonstration).
JOSEPH E. SMADEL, Washington, D. C.

The Electron Microscopy of Viruses.
RALPH W. G. WYCKOFF, Washington, D. C.

Common Virus Infections of the Respiratory Tract (Lantern Demonstration). JOHN H. DINGLE, Cleveland.

Search for Extrahuman Sources of Poliomyelitis Virus.
THOMAS FRANCIS JR. and GORDON C. BROWN, Ann Arbor, Mich.

Viruses and Virus-like Agents as Causes of Cancer (Lantern Demonstration). JOHN G. KIDD, New York.

The Present Status of Viruses and Virus Diseases.
E. W. SCHULTZ, Stanford University, Calif.

Friday, June 13—9 a. m.

SYMPOSIUM ON THE PRESENT STATUS OF CANCER RESEARCH

Cancer as an Autoparasite.
R. R. SPENCER, Washington, D. C.

The Biologic Assessment of Tumor Potentialities (Lantern Demonstration).
HENRY S. N. GREENE, New Haven, Conn.

Epidermal Carcinogenesis (Lantern Demonstration).
E. V. COWDRY, St. Louis.

Some Current Trends in Cancer Chemotherapy (Lantern Demonstration). M. J. SHEAR, Washington, D. C.

Radioactive Isotopes in the Diagnosis and Treatment of Malignant Disease. SHIELDS WARREN, Boston.

SECTION ON NERVOUS AND MENTAL DISEASES

MEETS IN ST. DENNIS ROOM, ST. DENNIS HOTEL

OFFICERS OF SECTION

Chairman—ROLAND P. MACKAY, Chicago.
Vice Chairman—LOUIS J. KARNOSH, Cleveland.
Secretary—FREDERICK P. MOERSCH, Rochester, Minn.
Executive Committee—J. M. NIELSEN, Los Angeles; PERCIVAL BAILEY, Chicago; ROLAND P. MACKAY, Chicago.

Wednesday, June 11—2 p. m.

Spontaneous Subarachnoid Hemorrhage of Aneurysmal Origin; Factors Influencing Prognosis: An Analysis of 130 Cases (Lantern Demonstration).
WALLACE B. HAMBY, Buffalo.
Discussion to be opened by J. C. RICHARDSON, Toronto, Canada, and I. S. WECHSLER, New York.

Address of Invited Foreign Guest.
THIERRY ALAJOUANINE, Paris, France.

The Program for the Activation of Neurology Under the Veterans Administration.
PEARCE BAILEY, Washington, D. C.
Discussion to be opened by J. M. NIELSEN, Los Angeles, and PERCIVAL BAILEY, Chicago.

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Ischemia of Peripheral Nerves: Experimental and Clinical Studies on the Role of the Vasa Nervorum (Lantern Demonstration).
JOSEPH T. ROBERTS, Washington, D. C.
Discussion to be opened by LOUIS J. KARNOSH and JOSEPH L. FETTERMAN, Cleveland.

Surgical Treatment of Intractable Unilateral Cephalalgia (Lantern Demonstration).
WALTER G. HAYNES, Birmingham, Ala.
Discussion to be opened by ROLAND P. MACKAY and PERCIVAL BAILEY, Chicago.

A Survey of the Value of Neurosurgical Treatment for the Relief of Intractable Pain.
HENRY T. WYCIS and MICHAEL SCOTT, Philadelphia.

Thursday, June 12—2 p. m.

Election of Officers

Centennial Address: One Hundred Years of Progress in Neurology, Neurologic Surgery and Psychiatry (Lantern Demonstration). STANLEY COBB, Boston.

The Historical Contribution of Neurophysiology to Neuropsychiatry (Lantern Demonstration).
JOHN F. FULTON, New Haven, Conn.
Discussion to be opened by HENRY R. VIETS, Boston, and PERCIVAL BAILEY, Chicago.

Neurosurgery (and the Neurosurgeon) in World War II.
R. GLEN SPURLING, Louisville, Ky.

Surgical Experience with Pituitary Tumors.
FRANCIS C. GRANT, Philadelphia.
Discussion to be opened by JAMES L. POPPEN, Boston, and EDGAR A. KAHN, Ann Arbor, Mich.

Friday, June 13—2 p. m.

Chairman's Address: The Neurologist Looks at Discipline.
ROLAND P. MACKAY, Chicago.

Research Leads in Contemporary Neurochemistry.
NOLAN D. C. LEWIS, New York.

Personality and Illness.
KARL M. BOWMAN and JURGEN RUESCH, San Francisco.
Discussion to be opened by HAROLD G. WOLFF, New York, and FRANZ G. ALEXANDER, Chicago.

Common Emotional Disturbances in the First Two Years of Life. BENJAMIN MCLANE SPOCK, Rochester, Minn.
Discussion to be opened by KARL M. BOWMAN, San Francisco.

The Organic Paranoid Syndrome (Lantern Demonstration).
GEORGE N. THOMPSON and J. M. NIELSEN, Los Angeles.
Discussion to be opened by S. BERNARD WORTIS, New York, and HARRY C. SOLOMON, Boston.

SECTION ON DERMATOLOGY AND SYPHILOLOGY

MEETS IN WEDGEWOOD ROOM, MARLBOROUGH-BLENHEIM HOTEL

OFFICERS OF SECTION

Chairman—NELSON PAUL ANDERSON, Los Angeles.
Vice Chairman—GEORGE C. ANDREWS, New York.
Secretary—CLINTON W. LANE, St. Louis.
Executive Committee—CLARK W. FINNERUD, Chicago; CLYDE L. CUMMER, Cleveland; NELSON PAUL ANDERSON, Los Angeles.

Wednesday, June 11—2 p. m.

Chairman's Address: Cysts, Sinuses and Fistulas of Dermatologic Interest (Lantern Demonstration).
NELSON PAUL ANDERSON, Los Angeles.

Address of Invited Foreign Guest: Dermatology; The International Outlook.
R. M. B. MACKENNA, London, England.

Centennial Address: One Hundred Years' Progress in Dermatology. OLIVER S. ORMSBY, Chicago.

Sarcoidosis: A Present Day Appraisal (Lantern Demonstration). HENRY E. MICHELSON, Minneapolis.
Discussion to be opened by FRED D. WEIDMAN, Philadelphia, and ARTHUR C. CURTIS, Ann Arbor, Mich.

Pemphigus: Experimental and Clinical Studies on the Etiology, Diagnosis and Therapy (Lantern Demonstration).
DAVID I. MACHT and MARCUS OSTRO, Baltimore.

The Causative Agent of Pemphigus Vulgaris (Lantern Demonstration). ARTHUR W. GRACE, Brooklyn.
Discussion on papers of DRS. MACHT and OSTRO and DR. GRACE to be opened by RICHARD S. WEISS, St. Louis, and WALTER F. LEVER, Boston.

Dermatologic Manifestations as Presenting Symptoms of Psychiatric States.
THEODORE CORNBLEET and MEYER BROWN, Chicago.
Discussion to be opened by MARION B. SULZBERGER, New York, and H. HANFORD HOPKINS, Baltimore.

Thursday, June 12—2 p. m.

Election of Officers

Streptomycin in the Therapy of Granuloma Inguinale (Lantern Demonstration).
H. S. KUPPERMAN, R. B. GREENBLATT and R. B. DIENST, Augusta, Ga.
Discussion to be opened by ROBERT R. KIERLAND, Rochester, Minn., and DONALD M. PILLSBURY, Philadelphia.

Centennial Address: One Hundred Years' Progress in Syphilis.
PAUL A. O'LEARY, Rochester, Minn.

Oral Bismuth Therapy in Syphilis and Various Inflammatory Dermatoses (Lantern Demonstration).
JAMES K. HOWLES, New Orleans, and E. R. GROSS, Philadelphia.
Discussion to be opened by DUDLEY C. SMITH, Charlottesville, Va., and ARTHUR W. NEILSON, St. Louis.

The Importance of Circumcision in Prevention of Venereal Disease and Certain Forms of Cancer (Lantern Demonstration). EUGENE A. HAND, Saginaw, Mich.
Discussion to be opened by JOHN E. RAUSCHKOLB, Cleveland, and FRANCIS A. ELLIS, Baltimore.

The Chemotherapy of Leprosy (Lantern Demonstration).
G. H. FAGET and PAUL T. ERICKSON, Carville, La.
Discussion to be opened by HAROLD M. JOHNSON, Honolulu, Hawaii, and M. T. VAN STUDDIFORD, New Orleans.

Clinical Problems in Penicillin Sensitivity (Lantern Demonstration).
SAMUEL M. PECK, SHEPPARD SIEGEL, ARTHUR W. GLICK and ABNER KURTIN, New York.
Discussion to be opened by HAROLD N. COLE, Cleveland, and E. MYLES STANDISH, Hartford, Conn.

Friday, June 13—2 p. m.

Autosensitization Dermatitis.
H. J. TEMPLETON, C. J. LUNSFORD and H. V. ALLINGTON, Oakland, Calif.
Discussion to be opened by C. F. LEHMANN, San Antonio, Texas, and EVERETT R. SEALE, Houston, Texas.

Nitrogen Mustards in the Treatment of Malignant Blastomas (Lantern Demonstration).
EARL D. OSBORNE, JAMES W. JORDON, FRANK C. HOAK JR. and FRANCIS J. PSCHIERER, Buffalo.
Discussion to be opened by CHARLES SPURR, Chicago, and LEON GOLDMAN, Cincinnati.

The Technic and Problems of Roentgen Ray Epilation.
HOWARD T. BEHRMAN and FRANK C. COMBES, New York.
Discussion to be opened by ANTHONY C. CIPOLLARO, New York, and A. H. LANCASTER, Knoxville, Tenn.

The Relation of Exit Dose and Other Dosage Factors to Roentgen Injuries.
JUNE C. SHAFER, CARL B. BRAESTRUP and JEROME K. FISHER, New York.
Discussion to be opened by C. GUY LANE, Boston, and ONIS G. HAZEL, Oklahoma City.

Injection Therapy for Angiomas (Lantern Demonstration).
G. Marshall Crawford, Boston.

Discussion to be opened by Harry F. Anderson, Washington, D. C., and Henry C. Shaw, Rochester, N. Y.

The Use of Liquid Oxygen in Dermatology.
Roy L. Kile and Ashton L. Welsh, Cincinnati.

Discussion to be opened by Howard Hailey, Atlanta, Ga., and Allen W. Pepple, Richmond, Va.

SECTION ON PREVENTIVE AND INDUSTRIAL MEDICINE AND PUBLIC HEALTH

MEETS IN TRELLIS ROOM, RITZ-CARLTON HOTEL

OFFICERS OF SECTION

Chairman—Clarence O. Sappington, Chicago.

Vice Chairman—R. H. Riley, Baltimore.

Secretary—Rutherford T. Johnstone, Los Angeles.

Executive Committee—Joseph W. Mountin, Washington, D. C.; E. L. Stebbins, New York; Clarence O. Sappington, Chicago.

Wednesday, June 11—9 a. m.

Chairman's Address. Clarence O. Sappington, Chicago.

Centennial Address. Clarence D. Selby, Detroit.

SYMPOSIUM ON HOW CAN QUALIFIED MEDICAL TESTIMONY (SCIENTIFIC PROOF) BE ATTAINED IN WORKMEN'S COMPENSATION CONTROVERSY?

J. W. Holloway Jr., Chicago, Moderator.
D. J. Galbraith, Toronto, Canada.
George N. Edson, Jackson Heights, N. Y.
Carey P. McCord, Detroit.
A. G. Kammer, New York.
W. G. Workman, Tracy, Minn.
Theodore C. Waters, Baltimore.

Discussion on symposium to be opened by Rollin E. Talbert, New York; Henry H. Kessler, Newark, N. J., W. H. Nickels Jr., Richmond, Va., and Frederick W. Slobe, Chicago, followed by participation by audience.

Thursday, June 12—9 a. m.

Election of Officers

The Longevity and Mortality of American Physicians (Lantern Demonstration). Louis I. Dublin, New York.

Address of Invited Foreign Guest: Comparative Practices in Industrial Medicine in Sweden and in the United States.
Sven Forssman, Tomtedoda, Sweden.

SYMPOSIUM ON THE NEED FOR INDUSTRIAL HEALTH EDUCATION, HOW, WHEN AND TO WHAT EXTENT

Robert A. Kehoe, Cincinnati, Moderator.
W. S. McElroy, Pittsburgh.
J. M. Carlisle, Rahway, N. J.
Leonard J. Goldwater, New York.
Henry F. Vaughan, Ann Arbor, Mich.
James H. Sterner, Rochester, N. Y.
W. C. L. Hemeon, Pittsburgh (Lantern Demonstration)

Discussion on symposium to be opened by Raymond Hussey, Detroit; Russell L. Haden, Cleveland and T. Lyle Hazlett, Pittsburgh, followed by participation by audience.

Friday, June 13—9 a. m.

The Diagnosis of DDT Poisoning.
Paul A. Neal, Bethesda, Md.

New Incisions and Technic in Peripheral Nerve Surgery (Lantern Demonstration). Emil Seletz, Los Angeles.

Preliminary Report on Schick Test Toxin Not Requiring Control in Adults (Lantern Demonstration).
Victor Ross, New York.

Studies of Diphtheria Immunization in Young Infants with Multiple Antigen (Lantern Demonstration).
Joseph A. Bell, Bethesda, Md.

Hookworm Infections in American Servicemen, with Reference to the Establishment of Ancylostoma Duodenale in the Southern United States (Lantern Demonstration).
Elmer H. Loughlin, Brooklyn.

The Development of a Blood and Blood Derivatives Program (Lantern Demonstration). Geoffrey Edsall, Boston.

Health Conditions in the Cemented Tungsten Carbide Industry.
L. T. Fairhall and H. T. Castberg, Bethesda, Md.

SECTION ON UROLOGY

MEETS IN WEDGEWOOD ROOM, MARLBOROUGH-BLENHEIM HOTEL

OFFICERS OF SECTION

Chairman—Grayson Carroll, St. Louis.

Vice Chairman—Clark M. Johnson, San Francisco.

Secretary—Edward N. Cook, Rochester, Minn.

Executive Committee—Gershon J. Thompson, Rochester, Minn.; Arbor D. Munger, Lincoln, Neb.; Grayson Carroll, St. Louis.

Wednesday, June 11—9 a. m.

The Problem of the Posteriorly Located Renal Pelvis Associated with Ptosis (Lantern Demonstration).
William P. Herbst, Washington, D. C.

Ureteropelvic Obstructions: Symptoms and Treatment (Lantern Demonstration). Roy B. Henline, New York.

Prostatic Surgery and Heart Disease (Lantern Demonstration).
Herman L. Kretschmer, Chicago.

Centennial Address: One Hundred Years in Urology (Lantern Demonstration).
William F. Braasch, Rochester, Minn.

Tumors of the Testicle (Lantern Demonstration).
Lloyd G. Lewis, Washington, D. C.

Tumors of the Testicle.
Hans R. Sauer, Ernest M. Watson and Eugene M. Burke, Buffalo.

Primary Carcinoma of the Seminal Vesicles; Differentiation from Extrarectal and Rectal Carcinoma: A Comparative Study (Lantern Demonstration).
Lowrain E. McCrea, Philadelphia.

Thursday, June 12—9 a. m.

Election of Officers

Disappearance of Carcinomatous Ulceration of the Bladder Following Bilateral Ureterosigmoidostomy (Lantern Demonstration). Edwin Davis, Omaha.

Twenty-Five Years of Radon Implantation for Bladder Cancer: Five Year Results.
Benjamin S. Barringer, New York.

Cystectomy for Carcinoma of the Bladder (Lantern Demonstration). Charles C. Higgins, Cleveland.

Chairman's Address: A Study of Pyocyaneus and Aerobacter Aerogenes in Urinary Infections (Lantern Demonstration). Grayson Carroll, St. Louis.

Address of Invited Foreign Guest (Lantern Demonstration).
Frank S. Patch, Montreal, Canada.

Pheochromocytoma (Lantern Demonstration).
George F. Cahill, New York.

Friday, June 13—9 a. m.

Surgical Management of Impacted Stone in the Lower Ureter (Lantern Demonstration).
Hamilton W. McKay and Kenneth M. Lynch Jr., Charlotte, N. C.

Management of Recurrent Formation of Renal Calculi (Lantern Demonstration). J. C. KIMBROUGH, Washington, D. C.

Hyaluronidase (Lantern Demonstration). W. W. SCOTT, Baltimore.

Cystourethrography in Children (Lantern Demonstration). M. LEOPOLD BRODNY, Boston.

SECTION ON ORTHOPEDIC SURGERY

MEETS IN ST. DENNIS ROOM, DENNIS HOTEL

OFFICERS OF SECTION

Chairman—FRANCIS M. MCKEEVER, Los Angeles.

Vice Chairman—J. WARREN WHITE, Greenville, S. C.

Secretary—JOSEPH S. BARR, Boston.

Executive Committee—GUY A. CALDWELL, New Orleans; THEODORE A. WILLIS, Cleveland; FRANCIS M. MCKEEVER, Los Angeles.

Wednesday, June 11—9 a. m.

PANEL DISCUSSION ON FRACTURES OF UPPER END OF THE FEMUR

PHILIP D. WILSON, New York, Moderator

Treatment of Acute Fractures of the Neck of the Femur (Lantern Demonstration). GEORGE W. VAN GORDER, Boston.

Management of Intertrochanteric Fracture of the Femur. MATHER CLEVELAND, D. M. BOSWORTH and F. R. THOMPSON, New York.

Medical Management of the Patient with a Fractured Hip (Lantern Demonstration). RICHARD H. FREYBERG, New York.

Cause, Development and Treatment of Aseptic Necrosis of the Femoral Head Following Fracture of the Hip (Lantern Demonstration). CARL E. BADGLEY, Ann Arbor, Mich.

Results of Treatment of Fractures of the Upper End of the Femur (Lantern Demonstration). HAROLD B. BOYD, Memphis, Tenn.

Treatment of Ununited Fractures of the Femur (Lantern Demonstration). J. A. DICKSON, Cleveland.

Thursday, June 12—9 a. m.

Election of Officers

Internal Derangements of the Knee (Lantern Demonstration). PAUL R. LIPSCOMB, MELVIN S. HENDERSON and RALPH E. DEFOREST, Rochester, Minn.

Discussion to be opened by MATHER CLEVELAND, New York, and E. F. CAVE, Boston.

Chairman's Address (Lantern Demonstration). FRANCIS M. MCKEEVER, Los Angeles.

The Treatment of Slipped Capital Femoral Epiphyses (Lantern Demonstration). ARMIN KLEIN, ROBERT J. JOPLIN and JOHN A. REIDY, Boston.

Discussion to be opened by H. R. MCCARROLL, St. Louis, and H. EARLE CONWELL, Birmingham, Ala.

Centennial Address. EDWIN W. RYERSON, Chicago.

Friday, June 13—9 a. m.

Massive Bone Grafts for the Restoration of Bone Defects in Long Bone. CARLO S. SCUDERI, Chicago.

Discussion to be opened by T. C. THOMPSON, New York, and FRANCIS E. WEST, San Diego, Calif.

The Value of Conservative Management in Cervicobrachial Pain (Lantern Demonstration). G. EDMUND HAGGART, Boston.

Discussion to be opened by I. W. NACHLAS, Baltimore, and JAMES MCATEER, New York.

Address of Invited Foreign Guest. JOSE VALLS, Buenos Aires, Argentina.

The Bone Bank (Lantern Demonstration). LEONARD F. BUSH, Danville, Pa., and C. ZENT GARBER, New York.

Discussion to be opened by JOHN R. COBB, New York, and RALPH K. GHORMLEY, Rochester, Minn.

Experimental Production of Aseptic Necrosis (Lantern Demonstration). PAUL C. COLONNA, Philadelphia.

Discussion to be opened by CARL E. BADGLEY, Ann Arbor, Mich., and DALLAS B. PHEMISTER, Chicago.

SECTION ON GASTRO-ENTEROLOGY AND PROCTOLOGY

MEETS IN TRELLIS ROOM, FITZ-CARLTON HOTEL

OFFICERS OF SECTION

Chairman—MARTIN S. KLECKNER, Allentown, Pa.

Vice Chairman—SARA M. JORDAN, Boston.

Secretary—GRANT H. LAING, Chicago.

Executive Committee—EMMETT H. TERRELL, Richmond, Va.; J. A. BARGEN, Rochester, Minn.; MARTIN S. KLECKNER, Allentown, Pa.

Wednesday, June 11—2 p. m.

Results of Treatment of Esophageal Varices by Injection of Sclerosing Solution (Lantern Demonstration). H. J. MOERSCH, Rochester, Minn.

Discussion to be opened by CECIL O. PATTERSON, Dallas, Texas.

Congenital Gallbladder Anomalies (Lantern Demonstration). BRUCE C. LOCKWOOD, Detroit.

SYMPOSIUM ON LIVER DISEASE

Diagnostic Aspects:

Address of Invited Foreign Guest: A Review of Some Clinical and Biochemical Problems of Liver Disease as Revealed by Systematic Biopsy Studies. JOHN MCMICHAEL, London, England.

The Accuracy of Diagnosis of Jaundice (Lantern Demonstration). WILLIAM F. LIPP and A. H. AARON, Buffalo.

Differential Diagnosis of Hepatitis by Histologic and Functional Laboratory Methods (Lantern Demonstration). HANS POPPER and MURRAY FRANKLIN, Chicago.

Therapeutic Aspects:

The Efficacy of Lipotrophic Substances in the Treatment of Liver Cirrhosis (Lantern Demonstration). FREDERICK STEIGMANN, Chicago.

Discussion to be opened by CECIL J. WATSON, Minneapolis.

Centennial Address: The History of Progress in Our Knowledge of the Digestive Tract During the Last Century. J. A. BARGEN, Rochester, Minn.

SYMPOSIUM ON PANCREAS

Chronic Pancreatitis Causing Complete and Incomplete Obstruction of the Common Duct: Report of Illustrative Cases (Lantern Demonstration). MOSES BEHREND, Philadelphia.

Diagnostic Criteria of Carcinoma of the Pancreas (Lantern Demonstration). GRAYSON F. DASHIELL, Chicago.

Functional Efficiency of the Gastrointestinal Tract Following Resection of the Head of the Pancreas (Whipple Operation): Effect of (1) Anastomosing Remaining Pancreas to the Jejunum; (2) Administration of Pancreatin; (3) Variations of the Fat and Nitrogen Content of the Diet (Lantern Demonstration). ERIC E. WOLLAEGER, MANFRED W. COMFORT, ARNOLD E. OSTERBERG and O. THERON CLAGETT, Rochester, Minn.

Discussion to be opened by ALLEN O. WHIPPLE, New York, and ROBERT ELMAN, St. Louis.

Thursday, June 12—2 p. m.

Election of Officers

Chairman's Address: Proctologic Surgery of the Large Bowel (Lantern Demonstration).
MARTIN S. KLECKNER, Allentown, Pa.

The Proctologic Examination of Infants and Children (Lantern Demonstration). SAUL SCHAPIRO, Brooklyn.

Anterior Pilonidal Cyst (Lantern Demonstration).
TOM E. SMITH, Dallas, Texas.

The Preparation and After-Care of the Patient Undergoing Surgery of the Lower Bowel.
HARRY E. BACON and ROBERT J. ROWE, Philadelphia.

Discussion to be opened by FRANK H. LAHEY, Boston, and LOUIS A. BUIE, Rochester, Minn.

SYMPOSIUM ON ULCERATIVE COLITIS

Clinical Aspects:

The Etiologic Diagnosis of Ulcerative Colitis (Lantern Demonstration).
WILLIAM Z. FRADKIN, Brooklyn.

Certain Clinical Aspects of Ulcerative Colitis (Lantern Demonstration). J. B. KIRSNER, Chicago.

Treatment:

Total Parenteral Alimentation and Therapy in Ulcerative Colitis: Its Place in Management (Lantern Demonstration). MOSES PAULSON, Baltimore.

The Surgical Treatment of Ulcerative Colitis (Lantern Demonstration). RICHARD B. CATTELL, Boston.

Discussion to be opened by J. A. BARGEN, Rochester, Minn., and E. N. COLLINS, Cleveland.

SYMPOSIUM ON GASTRITIS AND GASTRIC NEOPLASMS

Therapy of Chronic Atrophic Gastritis with Seven Years' Gastroscopic Control (Lantern Demonstration).
LEONIDAS H. BERRY and T. JONATHAN COLE, Chicago.

Clinical Distinctions Between Gastric Sarcoma and Carcinoma, with Special Reference to the Infiltrating Types of Sarcomas (Lantern Demonstration).
ANTHONY BASSLER, New York.

The Prognosis in Gastric Cancer (Lantern Demonstration).
SAMUEL N. MAIMON, Chicago.

Blood Pattern in Presymptomatic Malignancy of the Gastrointestinal Tract (Lantern Demonstration).
H. LEONARD BOLEN, Fall River, Mass.

Discussion to be opened by CHARLES ALEXANDER LAMB, Boston, and HYMAN I. GOLDSTEIN, Camden, N. J.

Friday, June 13—2 p. m.

JOINT MEETING WITH SECTION ON SURGERY, GENERAL AND ABDOMINAL, IN WESTMINSTER HALL, CHELSEA HOTEL

SYMPOSIUM ON PEPTIC ULCER

Statistical Study of Over 1,000 Cases of Peptic Ulcer (Lantern Demonstration). MAURICE FELDMAN, Baltimore.

Onset of Peptic Ulcer in the Aged (Lantern Demonstration).
HENRY A. RAFSKY, MICHAEL WEINGARTEN and CHARLES I. KRIEGER, New York.

Nocturnal Gastric Secretion in Normal Individuals and in Peptic Ulcer (Lantern Demonstration). ERVIN LEVIN, Chicago.

Therapeutic Agents:

Effect of Enterogastrone in Patients with Gastric and Duodenal Ulcer (Lantern Demonstration).
H. M. POLLARD and WILLIAM H. BACHRACH, Ann Arbor, Mich.

Aluminum Hydroxide Mixture with Mucin in the Treatment of Peptic Ulcer (Lantern Demonstration).
LEO L. HARDT, Chicago.

Synthetic Resin: A New Antacid for Treatment in Peptic Ulcer (Lantern Demonstration).
MANFRED KRAEMER and LEO H. SIEGEL, Newark, N. J.

Discussion on papers of DR. FELDMAN, DRS. RAFSKY, WEINGARTEN and KRIEGER, DR. LEVIN, DRS. POLLARD and BACHRACH, DR. HARDT and DRS. KRAEMER and SIEGEL to be opened by DRS. A. C. IVY and LESTER R. DRAGSTEDT, Chicago; SARA M. JORDAN, Boston; RALPH COLP, New York; WALTER L. PALMER, Chicago, and ASHER WINKELSTEIN, New York.

Favorable and Unfavorable Results of Vagus Nerve Resections in the Treatment of Peptic Ulcer: An Anatomic, Physiologic and Clinical Study (Lantern and Motion Picture Demonstration).
WALTMAN WALTERS, Rochester, Minn.

Discussion to be opened by LESTER R. DRAGSTEDT, Chicago; RALPH COLP, New York, and KEITH S. GRIMSON, Durham, N. C.

Results of Surgical Treatment for Gastric Ulcer (Lantern Demonstration).
SAMUEL F. MARSHALL, Boston, and MARK L. WELCH, Dallas, Texas.

Discussion to be opened by HARVEY B. STONE, Baltimore, and J. WILLIAM HINTON, New York.

Complications of Peptic Ulcer (Lantern Demonstration).
HAROLD L. THOMPSON, Los Angeles.

Discussion to be opened by ARTHUR W. ALLEN, Boston.

SECTION ON RADIOLOGY

MEETS IN ROOM 30, CONVENTION HALL

OFFICERS OF SECTION

Chairman—BERNARD P. WIDMANN, Philadelphia.

Vice Chairman—W. WALTER WASSON, Denver.

Secretary—U. V. PORTMANN, Cleveland.

Executive Committee—ROBERT A. ARENS, Chicago; EDWIN C. ERNST, St. Louis; BERNARD P. WIDMANN, Philadelphia.

Wednesday, June 11—2 p. m.

Business Session

Address of Invited Foreign Guest: The Question of Cardiac Hypertrophy in Residents of High Altitudes: Radiologic Study Conducted at 8,636 Feet Above Sea Level.
GONZALO ESGUERRA GOMEZ, Bogota, Colombia, South America.

Centennial Address: Contributions of Radiology to the Diagnosis and Treatment of Disease.
GEORGE W. HOLMES, Boston.

Routine Roentgen Examination of the Stomach of Symptomless Individuals (Lantern Demonstration).
LEO G. RIGLER, Minneapolis.

Discussion to be opened by ROSS GOLDEN, New York.

Nonneoplastic Intracranial Calcification: Roentgenologic Manifestations (Lantern Demonstration).
JOHN D. CAMP, Rochester, Minn.

Discussion to be opened by EUGENE P. PENDERGRASS, Philadelphia.

Clinical Manifestations of Disease Masked or Modified by Chemotherapy: Increasing Responsibility of the Roentgenologist (Lantern Demonstration).
VINCENT W. ARCHER, GEORGE COOPER and NORMAN ADAIR, University, Va.

Discussion to be opened by GEORGE M. WYATT, Washington, D. C.

Fundamental Concepts of Radiographic Diagnosis of Lesions of the Kidney (Lantern Demonstration).
IRA H. LOCKWOOD, ARTHUR B. SMITH and JOHN W. WALKER, Kansas City, Mo.

Discussion to be opened by H. DABNEY KERR, Iowa City.

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Cholangiography in Stone, Stricture and Surgical Injury of Biliary Ducts (Lantern Demonstration).
C. ROBERT HUGHES, JOHN R. HANNAN and BERT E. MULVEY, Cleveland.
Discussion to be opened by THOMAS E. JONES, Cleveland.

Thursday, June 12—2 p. m.

Business Session

Election of Officers

Roentgen Appearance of the Chest in Some Diseases Affecting the Peripheral Vascular System of the Lung (Lantern Demonstration).
ROBERT P. BARDEN and DAVID A. COOPER, Philadelphia.
Discussion to be opened by FRANCIS M. RACKEMANN, Boston.

Roentgen Diagnosis of Myocardial Infarction (Lantern Demonstration).
L. HENRY GARLAND, San Francisco, and S. F. THOMAS, Palo Alto, Calif.
Discussion to be opened by PHILIP J. HODES, Philadelphia.

Pulmonary and Superior Caval Angiography in Relation to Pulmonary and Mediastinal Lesions (Lantern Demonstration).
MARCY L. SUSSMAN and HAROLD NEUHOF, New York.
Discussion to be opened by EVARTS A. GRAHAM, St. Louis.

Laminography as an Aid in the Diagnosis of Certain Nontuberculous Lesions in the Chest (Lantern Demonstration).
ELDWIN R. WITWER, Detroit, and H. L. HIEBERT, Topeka, Kan.
Discussion to be opened by WENDELL G. SCOTT, St. Louis.

Clinical and Roentgen Studies of Radiculitis Simulating Coronary Disease (Lantern Demonstration).
MAX RITVO and DAVID DAVIS, Boston.
Discussion to be opened by ALBERT OPPENHEIMER, Laconia, N. H.

Roentgenographic Examination of Breast Cancer.
J. GERSHON-COHEN and PHILLIP J. HODES, Philadelphia.
Discussion to be opened by W. WALTER WASSON, Denver.

Friday, June 13—2 p. m.

Late Results of Radium Therapy for Carcinoma of the Uterine Cervix (Lantern Demonstration).
HARRY H. BOWING and ROBERT E. FRICKE, Rochester, Minn.
Discussion to be opened by LEDA JUNE STACY, White Plains, N. Y.

The Role of Transvaginal Roentgenotherapy in the Treatment of Carcinoma of the Cervix (Lantern Demonstration).
JUAN A. DEL REGATO, Columbia, Mo.
Discussion to be opened by JAMES A. CORSCADEN, New York.

Critical Evaluation of Surgical and Radiation Therapy for Carcinoma of the Cervix (Lantern Demonstration).
MANUEL M. GARCIA and LEON J. MENVILLE, New Orleans.
Discussion to be opened by KARL H. MARTZLOFF, Portland, Ore.

The Role of Radiation Therapy in Cancer of the Breast (Lantern Demonstration).
ORVILLE N. MELAND, WILLIAM E. COSTOLOW and JOHN W. BUDD, Los Angeles.
Discussion to be opened by U. V. PORTMANN, Cleveland.

The Production of Analgesia by X-Radiation.
FREDERICK W. O'BRIEN, Boston.
Discussion to be opened by HUGH F. HARE, Boston.

X-Rays in the Prevention and Treatment of Infections (Lantern Demonstration).
JAMES F. KELLY, D. ARNOLD DOWELL and JOHN E. DOWNING, Omaha.
Discussion to be opened by JOHN S. BOUSLOG, Denver.

Roentgenologic Treatment of Lymph Nodes and Spleen in Brill-Symmers Disease. SIDNEY RUBENFELD, New York.
Discussion to be opened by SAMUEL E. COHEN, Elmira, N. Y.

SECTION ON ANESTHESIOLOGY

MEETS IN ROOM 20, CONVENTION HALL

OFFICERS OF SECTION

Chairman—CHARLES F. MCCUSKEY, Los Angeles.
Vice Chairman—HARRY BOYD STEWART, Tulsa, Okla.
Secretary—JOHN S. LUNDY, Rochester, Minn.
Executive Committee—PAUL M. WOOD, New York; ANSEL M. CAINE, New Orleans; CHARLES F. MCCUSKEY, Los Angeles.

Wednesday, June 11—9 a. m.

Business Meeting for Presenting Resolutions.

Balanced Anesthesia for Thoracoplasty.
CLARENCE L. HEBERT, Washington, D. C.
Discussion to be opened by ROBERT RICHARD JONES, Battle Creek, Mich., and ROBERT B. ORR, St. Albans, N. Y.

Chloroform (Lantern Demonstration).
RALPH M. WATERS, Madison, Wis.
Discussion to be opened by PAUL M. WOOD, New York, and IRVING W. POTTER, Buffalo.

Anesthesia for Abdominal Surgery (Lantern Demonstration).
EDWARD B. TUOHY, Rochester, Minn.
Discussion to be opened by FREDERICO VOLBRECHTHAUSEN, Mexico City, Mexico, and HARRY J. SHIELDS, Toronto, Canada.

Controlled Hypotension by Arterial Bleeding During Operation and Anesthesia (Lantern Demonstration).
DONALD E. HALE, Cleveland.
Discussion to be opened by PERRY P. VOLPITTO, Augusta, Ga., and W. JAMES GARDNER, Cleveland.

Effect of Procaine on Liver Function: An Experimental and Clinical Study (Lantern Demonstration).
J. J. JACOBY, J. M. COON and H. M. LIVINGSTONE, Chicago.
Discussion to be opened by ROBERT D. DRIPPS JR., Philadelphia, and JOHN ADRIANI, New Orleans.

Thursday, June 12—9 a. m.

Election of Officers

Chairman's Address: The Present Status of the Anesthesiology Specialist or Specialty.
CHARLES F. MCCUSKEY, Los Angeles.

Pathology and Anesthesiology. FRANK W. HARTMAN, Detroit.
Discussion to be opened by WESLEY BOURNE, Montreal, Canada, and VIRGIL H. MOON, Philadelphia.

Address of Invited Foreign Guest: Anesthesia for Operations Within the Vertebral Canal.
A. R. HUNTER, Manchester, England.

Centennial Address: One Hundred Years of Anesthesia (Lantern Demonstration). JOHN S. LUNDY, Rochester, Minn.

Anesthesia in Pediatric Patients.
CHARLES H. ROBSON, Toronto, Canada.
Discussion to be opened by CURTISS B. HICKCOX, Philadelphia, and LLOYD H. MOUSEL, Washington, D. C.

Friday, June 13—9 a. m.

A Comparison of the Analgesic Effects in Human Subjects of 6-Dimethyl Amino-4, 4-Diphenyl-3-Heptonone (An-148), Morphine and Meperidine (Demerol), and the Relative Efficiency of An-148 for Preoperative and Postoperative Use. EUNICE CHRISTENSEN and E. G. GROSS, Iowa City.
Discussion to be opened by LEO V. HAND, Boston, and STUART C. CULLEN, Iowa City.

Anesthesia Study Commission: Findings of Eleven Years' Activity.
HENRY S. RUTH, Haverford, Pa., and FREDERICK P. HAUGEN and D. DWIGHT GROVE, Philadelphia.
Discussion to be opened by R. J. WHITACRE, East Cleveland, Ohio, and FLOYD T. ROMBERGER, Lafayette, Ind.

Cardiac Arrest.
EDWIN R. RUZICKA and MORRIS J. NICHOLSON, Boston.
Discussion to be opened by JOHN B. FLICK, Philadelphia, and RALPH M. TOVELL, Hartford, Conn.

Use of Differential Spinal Block in the Investigation of Intractable Pain Following Trauma to the Lower Extremity (Lantern Demonstration).
JULIA G. ARROWOOD and STANLEY J. SARNOFF, Boston.
Discussion to be opened by MEYER SAKLAD, Providence, R. I., and JOE BAIRD, Minneapolis.

Anesthesia in the Aged (Lantern Demonstration).
JOHN B. DILLON, Los Angeles.
Discussion to be opened by ANSEL M. CAINE, New Orleans, and MARY KARP, Chicago.

SECTION ON GENERAL PRACTICE OF MEDICINE

MEETS IN CAMBRIDGE HALL, CLARIDGE HOTEL

OFFICERS OF SECTION

Chairman—PAUL A. DAVIS, Akron, Ohio.
Vice Chairman—E. A. ROYSTON, Los Angeles.
Secretary—W. B. HARM, Detroit.
Executive Committee—WINGATE M. JOHNSON, Winston-Salem, N. C.; PAUL A. DAVIS, Akron, Ohio.

Wednesday, June 11—9 a. m.

Chairman's Address. PAUL A. DAVIS, Akron, Ohio.
Address of Invited Foreign Guest: Nutrition and Endocrinology, with Special Reference to Nutrition Among the Indians of Mexico.
FRANCISCO DEP. MIRANDA, Mexico City, Mexico.
Centennial Address: What Should the General Practitioner Know About This New Psychosomatic Medicine?
WALTER C. ALVAREZ, Rochester, Minn.
The Significance of Hypergenitalism Occurring Before or at the Time of Puberty (Lantern Demonstration).
LEWIS M. HURXTHAL, Boston.
The Use of Fluorine in Pediatrics (Lantern Demonstration).
NILS P. LARSEN, Honolulu, Hawaii.

Thursday, June 12—9 a. m.

Election of Officers

The General Practitioner as an Adjunct to the Industrial Surgeon. F. E. POOLE, Glendale, Calif.
Common Misconceptions in Regard to Dermatology (Lantern Demonstration). MARION B. SULZBERGER, New York.
The Management of Hypertension and Its Chief Complications (Lantern Demonstration).
FRANCIS D. MURPHY, Milwaukee.
Discussion to be opened by N. C. GILBERT, Chicago.
Nasal Stuffiness (Lantern Demonstration).
J. LEWIS DILL, Detroit.
The Traumatic Abdomen (Lantern Demonstration).
ARTHUR R. METZ and RAYMOND HOUSEHOLDER, Chicago, and GERRIT DANGREMAND, Lake Bluff, Ill.
Discussion to be opened by GROVER C. PENBERTHY, Detroit.
Reducing Mortality in Gastric Carcinoma (Lantern Demonstration). GILSON COLBY ENGEL, Philadelphia.
Discussion to be opened by T. GRIER MILLER, Philadelphia.

Friday, June 13—9 a. m.

Further Observations on Dehydration Treatment in Poliomyelitis, with Some New Concepts in the Pathologic Physiology of the Disease. T. E. ROBINSON, Salt Lake City.
The Treatment of Chronic Auricular Fibrillation with Quinidine Sulfate (Lantern Demonstration).
ROBERT L. MCMILLAN and CHARLES R. WELFARE, Winston-Salem, N. C.
Discussion to be opened by ROY W. SCOTT, Cleveland.
Psychotherapy in Everyday Practice.
EDWARD WEISS, Philadelphia.
Discussion to be opened by CARL A. L. BINGER, New York.
Hints in General Surgery (Lantern Demonstration).
R. B. ROBINS, Camden, Ark.
Headache. STUYVESANT BUTLER, Chicago.
Clinical Value of Globin Insulin.
WALLACE M. YATER, Washington, D. C.

SECTION ON MISCELLANEOUS TOPICS

MEETS IN CAMBRIDGE HALL, CLARIDGE HOTEL

Session on History of Medicine

OFFICERS OF SESSION

Chairman—JOHN F. FULTON, New Haven, Conn.
Secretary—HOWARD DITTRICK, Cleveland.

Wednesday, June 11—2 p. m.

HISTORY OF AMERICAN MEDICINE

In the Old Dominion. M. P. RUCKER, Richmond, Va.
In the Massachusetts Bay Colony (Lantern Demonstration).
H. R. VIETS, Boston.
In Philadelphia. R. H. SHRYOCK, Philadelphia.
In Kentucky and the Mississippi Valley.
E. F. HORINE, Louisville, Ky.

Intermission

Address of Invited Foreign Guest: Spread of the Public Health Movement, 1847-1947.
E. ASHWORTH UNDERWOOD, London, England.

HISTORY OF MILITARY MEDICINE

Public Health Service. R. E. DYER, Bethesda, Md.
United States Navy. L. H. RODDIS, Washington, D. C.
United States Army. H. W. JONES, Washington, D. C.

Session on Physical Medicine

OFFICERS OF SESSION

Chairman—FRANK H. KRUSEN, Rochester, Minn.
Secretary—GEORGE M. PIERSOL, Philadelphia.

Thursday, June 12—2 p. m.

Address of Invited Foreign Guest: The Relationship of Physical Medicine to Industrial Medicine (Lantern Demonstration).
D. Y. SOLANDT, Toronto, Canada.
Rehabilitation of Paraplegics.
EARL C. ELKINS, Rochester, Minn.
Psychiatric Aspects of Physical Medicine (Lantern Demonstration). ARTHUR L. WATKINS and JACOB ELLIS FINESINGER, Boston.
Fundamentals of Physical Medicine of Interest to the General Practitioner. STEVEN M. HORVATH, Philadelphia.

Intermission

PANEL DISCUSSION ON PHYSICAL MEDICINE IN GENERAL PRACTICE

FRANK H. KRUSEN, Rochester, Minn., Moderator

Physical Treatment of Arthritis.
WALTER M. SOLOMON, Cleveland.
Physical Medicine in the Treatment of the Aged.
WALTER S. MCCLELLAN, Saratoga Springs, N. Y.
Physical Medicine and Backache. FRANK R. OBER, Boston.
Physical Treatment of Common Dermatologic Conditions (Lantern Demonstration).
ANTHONY C. CIPOLLARO, New York.
Physical Medicine in the Management of Fractures (Lantern Demonstration). MILAND E. KNAPP, Minneapolis.

Session on Allergy

OFFICERS OF SESSION

Chairman—HARRY L. HUBER, Chicago.
Secretary—RICHARD KERN, Philadelphia.

Friday, June 13—2 p. m.

Allergy in the Perspective of General Medical Practice (Lantern Demonstration). HARRY L. ALEXANDER, St. Louis.
Discussion to be opened by STEARNS S. BULLEN, Rochester, N. Y.

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The Newer Concept of Allergy to Drugs and Bacteria.
FRANCIS C. LOWELL, Boston.
Discussion to be opened by M. G. BOHROD, Rochester, N. Y.

The Practical Aspects of Allergic Rhinitis (Lantern Demonstration).
LEO H. CRIEP, Pittsburgh.
Discussion to be opened by THEODORE L. SQUIER, Milwaukee.

Cutaneous Allergy in Pediatric Practice (Lantern Demonstration).
JEROME GLASER, Rochester, N. Y.
Discussion to be opened by ALBERT V. STOESSER, Minneapolis.

The Newer Drugs in the Treatment of Allergic Diseases.
SAMUEL M. FEINBERG, Chicago.
Discussion to be opened by LEON UNGER, Chicago.

PANEL DISCUSSION ON THE TREATMENT OF ASTHMA

J. HARVEY BLACK, Dallas, Texas, Moderator.
CHARLES H. EYERMAN, St. Louis (Lantern Demonstration).
LOUIS TUFT, Philadelphia.
GEORGE PINESS, Los Angeles.
Discussion to be summarized by ROBERT A. COOKE, New York.

THE SCIENTIFIC EXHIBIT

The Scientific Exhibit will be located on the main floor of the Atlantic City Auditorium, with entrances adjacent to the general registration desks.

In addition to the seventeen groups of exhibits sponsored by the sections of the Scientific Assembly there will be four special exhibits subsidized by the Board of Trustees. Question and answer conferences on heart disease and on diabetes will be conducted in conjunction with exhibits on those subjects, and three motion picture theaters will show films continuously throughout the week. While a considerable amount of historical material will be shown, the main emphasis of the Scientific Exhibit will be placed on the latest developments in medicine.

Admission to the Scientific Exhibit will be limited to persons wearing the Fellowship badge or other official badge of the Convention. The public will not be admitted to the Scientific Exhibit.

SPECIAL EXHIBITS

The Committee on Scientific Exhibit is sponsoring four special exhibits—cardiovascular diseases, fractures, fresh pathologic material and physical medicine.

Special Exhibit on Cardiovascular Diseases

The Special Exhibit on Cardiovascular Diseases is presented under the auspices of a special committee of which Paul Dudley White, Boston, is chairman, assisted by a large group of physicians. Following are the subjects which will be shown, together with a brief description of each and the names of the demonstrators:

PAUL DUDLEY WHITE and FRED ALEXANDER, Massachusetts General Hospital, Boston:

The Range of the Normal Heart: The range of the normal human cardiovascular characteristics is illustrated by several charts and diagrams constructed for age, body build (height, weight and somatotype) and physiologic activity.

ROBERT E. GROSS, LEWIS DEXTER, MERRILL C. SOSMAN and C. SIDNEY BURWELL, Children's Hospital, Boston:

Congenital Cardiovascular Disease, Noncyanotic: This exhibit illustrates the physiologic and clinical findings in congenital heart disease of the noncyanotic type, particularly patency of the ductus arteriosus and coarctation of the aorta, and their surgical correction.

HELEN B. TAUSSIG, ALFRED BLALOCK and R. N. PAUL, Johns Hopkins Hospital, Baltimore:

Congenital Cardiovascular Disease, Cyanotic: Congenital cardiovascular disease of the cyanotic type and its surgical correction are illustrated by diagrams, roentgenograms, electrocardiograms and patients themselves, with particular reference to the tetralogy of Fallot.

T. DUCKETT JONES, Boston; EDWARD F. BLAND, Brookline, and DAVID D. RUTSTEIN, Albany, N. Y.:

Rheumatic Fever and Rheumatic Heart Disease: The vital importance of the development of community programs for the study and control of rheumatic fever and rheumatic heart disease is illustrated in this exhibit.

THOMAS H. HUNTER and RICHARD B. DUANE JR., New York:

Subacute Bacterial Endocarditis: This exhibit illustrates the remarkable progress during the last few years in the treatment of subacute bacterial endocarditis by chemotherapy, particularly by the use of penicillin. The diagnosis and prophylaxis of the disease are also emphasized.

MANDEL E. COHEN, Neurological Unit, Boston City Hospital, Boston:

Neurocirculatory Asthenia: The clinical findings of neurocirculatory asthenia, anxiety neurosis or effort syndrome are summarized by the use of charts showing the high familial incidence, abnormalities in breathing and in blood lactate during work, reaction to painful stimuli at low levels and abnormal psychologic tests.

HERRMAN L. BLUMGART, MONROE J. SCHLESINGER and P. M. ZOLL, Beth Israel Hospital, Boston:

Coronary Heart Disease: Variations in the coronary arterial pattern in health and disease are illustrated by statistical charts, tables and colored and labeled roentgenograms. Coronary venous injections are shown also.

WILLIAM C. BRIDGES, REGINALD H. SMITHWICK, LEWIS DEXTER, DERA KINSEY and JOHN R. GRAHAM, Boston:

Hypertension and Hypertensive Heart Disease: An analysis of hypertension, its effects on the heart and its treatment by various measures, in particular sympathectomy, are illustrated in this exhibit.

CONGER WILLIAMS, Massachusetts General Hospital, Boston:

Electrocardiography: In this exhibit emphasis is placed on the newer technics of electrocardiography and their results, in particular the unipolar and precordial leads and their application to important changes in the myocardium.

GORDON S. MYERS, Massachusetts General Hospital, Boston:

Cardiovascular Roentgenology: The importance of cardiovascular roentgenology is illustrated by examples showing its value in studies of the heart, particularly of the auricles and of the great vessels. Special methods of study are included; namely diodrast injection, kymography and cardiac catheterization.

DAVID LITTMANN, Veterans Hospital, West Roxbury, Mass.:

Rare Heart Disease: To remind the medical profession of rare but important kinds of cardiovascular disease, this exhibit has been prepared with illustrations of seventeen types.

D. C. ELKIN and FREDERICK W. COOPER JR., Emory University, Atlanta, Ga.:

Vascular Surgery: The physiologic effects of arteriovenous fistulas and other vascular injuries on the circulation are presented and the results of surgical therapy shown.

ARTHUR C. DEGRAFF and ROBERT C. BATTERMAN, New York University, New York:

Treatment of Myocardial Failure and Coronary Artery Insufficiency: This exhibit presents various therapeutic procedures in the treatment of myocardial failure and coronary artery insufficiency, emphasizing in particular the use of digitalis, diuretics and dietary regimens.

ROBERT R. LINTON, GORDON A. DONALDSON, GEORGE EMERSON, KENNETH EVELYN, RICHARD HAMLIN, IRAD HARDY, H. E. KENNARD, F. A. SIMEONE, RICHARD THOMPSON, HOWARD

ULFELDER, RICHARD H. WALLACE, RICHARD WARREN and CLAUDE E. WELCH, Massachusetts General Hospital, Boston:

Diseases of Arteries and Veins: Photographs and charts are presented in this exhibit to describe and illustrate the chief diseases that involve peripheral arteries and veins.

PAUL DUDLEY WHITE, Massachusetts General Hospital, Boston:

Historic Books: A collection of historic volumes which have been milestones in the progress of our knowledge of the heart and circulation in health and disease is demonstrated along with charts showing the evolution of our knowledge in this field.

GEORGE E. BURCH and THORPE RAY, New Orleans:

Cardiovascular Syphilis: The most important features of cardiovascular syphilis for present day information are illustrated in this exhibit.

HOWARD B. SPRAGUE, Boston, and H. M. MARVIN, New Haven, Conn.:

American Heart Association: The exhibit graphically presents the relative importance of diseases of the heart and circulation as well as the need for and the services rendered by local heart associations throughout the country.

Special Exhibit on Fractures

The Specal Exhibit on Fractures is presented for the sixteenth time under the auspices of the following committee:

Kellogg Speed, Chicago, chairman.
Frank D. Dickson, Kansas City, Mo.
Gordon M. Morrison, Boston.

The exhibit will be accompanied by continuous demonstrations throughout the week on the following subjects:

Compression Fracture of the Spine.
Fracture of the Carpal Navicular.
Fracture of the Shaft of the Femur.
Fractures into the Knee Joint.
Fracture of the Lower End of the Radius.

A pamphet giving the essential features of the exhibit will be distributed.

The following orthopedic surgeons will assist the committee with the demonstrations:

Howard Appollonio, Camden, Maine.
Kelie Asbury, Cincinnati.
Hillier L. Baker, Chicago.
Carroll Glen Barber, Cleveland.
James J. Callahan, Chicago.
A. H. Conley, Chicago.
C. Fred Fercist, Lincoln, Neb.
Alfred E. Gallant, Los Angeles.
Nicholas J. Giannestras, Cincinnati.
G. Edmund Haggart, Boston.
Frank M. Hand, Washington, D. C.
J. Whitfield Larrabee, Hartford, Conn.
Henry Milch, New York.
John J. Milroy, Waukegan, Ill.
Gordon M. Morrison, Boston.
Frank G. Murphy, Chicago.
John R. Norcross, Chicago.
John W. O'Meara, Worcester, Mass.
Col. Leonard T. Peterson, Washington, D. C.
Thomas B. Quigley, Boston.
H. E. Reading, Paterson, N. J.
Sheppard Remington, Chicago.
Carlo S. Scuderi, Chicago.
Russell F. Sullivan, Brookline, Mass.
Samuel Turek, Chicago.
Theodore H. Vinke, Cincinnati.
Herbert W. Virgin, Miami, Fla.

Special Exhibit on Fresh Pathologic Material

The Special Exhibit on Fresh Pathologic Material is presented with the cooperation of the Section on Pathology and Physiology under the auspices of the following committee:

Frank W. Konzelmann, Atlantic City Hospital, Atlantic City, N. J., chairman.

Jefferson H. Clark, Philadelphia General Hospital, Philadelphia.

Edwin S. Gault, Temple University Medical School, Philadelphia.

Peter A. Herbut, Jefferson Medical College, Philadelphia.

An advisory committee has been appointed to assist the general committee, and includes the following members:

Helen Engleby, Philadelphia.
Alvin G. Foord, Pasadena, Calif.
Frank W. Hartman, Detroit.
Edward B. Krumbhaar, Philadelphia.
Harrison S. Martland, Newark, N. J.
Virgil H. Moon, Philadelphia.
J. J. Moore, Chicago.
Robert A. Moore, St. Louis.

Continuous demonstrations will be carried on throughout the week with the aid of the following pathologists:

Ernest E. Aegerter, Philadelphia.
William P. Belk, Wynnewood, Pa.
Theodore J. Curphey, Hempstead, N. Y.
William Ehrich, Philadelphia.
H. Russell Fisher, Los Angeles.
William W. Hershon, Atlantic City, N. J.
Morton McCutcheon, Philadelphia.
Carlos A. Pons, Asbury Park, N. J.
Helen E. Riggs, Philadelphia.
Asher Yaguda, Newark, N. J.

Special Exhibit on Physical Medicine

The Special Exhibit on Physical Medicine includes Physical Therapy, Occupational Therapy and Rehabilitation. It is presented for the second time under the auspices of the following committee:

Frank H. Krusen, Rochester, Minn., chairman.
Winifred Overholser, Washington, D. C.
Howard A. Rusk, New York.

The subjects covered in the exhibit, with the demonstrators in charge, are as follows:

KURT LION, Massachusetts Institute of Technology, Cambridge, Mass.:

Technology and Physical Medicine: This exhibit will deal with the fundamentals of biophysics and instrumentation as related to practice of and research in physical medicine.

KHALIL G. WAKIM, Mayo Foundation, University of Minnesota, Rochester, Minn.:

Experimental Research in Physical Medicine: This exhibit will present recent developments in experimental research concerning high frequency radiation (microwaves) for heating of living tissues and also studies on the effects of physically induced fever on flow of blood.

FRANCES HELLEBRANDT, Baruch Center on Physical Medicine, Medical College of Virginia, Richmond:

Clinical Research in Physical Medicine; Disability Evaluation: This exhibit will demonstrate methods of clinical research in physical medicine and elucidate particularly the employment of ergographs and other measuring devices in the evaluation of disabilities commonly encountered in the practice of physical medicine.

LIEUT. COL. BENJAMIN A. STRICKLAND JR., Physical Medicine Consultants Division, Office of the Surgeon General, War Department, Washington, D. C.:

Dynamic Physical Reconditioning: This exhibit will demonstrate the methods developed in army hospitals for reconditioning convalescent and disabled persons.

DONALD COVALT, Division of Rehabilitation and Physical Medicine, Department of Medicine and Surgery, Veterans Administration, Washington, D. C.:

Physical Rehabilitation for Hemiplegia: This exhibit will demonstrate the employment of physical therapy, occupational therapy and physical rehabilitation in the management of persons having hemiplegia.

ROBERT L. BENNETT, Warm Springs Foundation, Warm Springs, Ga.:

Physical Rehabilitation for Poliomyelitis: This exhibit will describe the use of physical therapy, occupational therapy and physical rehabilitation for persons having poliomyelitis.

WINTHROP M. PHELPS, Children's Rehabilitation Institute, Baltimore:

Physical Rehabilitation for Cerebral Palsy: This exhibit will present the methods of employing various phases of physical medicine for rehabilitation of persons having cerebral palsy.

HOWARD F. POLLEY, Mayo Foundation, University of Minnesota, Rochester, Minn.:

Physical Rehabilitation for Arthritis: This exhibit will deal with the employment of physical procedures for rehabilitation of persons having arthritis.

HENRY H. KESSLER, New Jersey Rehabilitation Clinic, Newark, N. J.:

Physical Rehabilitation of Amputees: This exhibit will present methods of rehabilitating persons who have major amputations of upper or lower extremities.

A pamphlet giving the essential features of the exhibit will be distributed.

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The following demonstrators will assist in the presentation of the exhibit:

Maxwell R. Berry, Atlanta, Ga.
Ruth Brunyate, Baltimore.
Howard A. Carter, Chicago.
Anthony C. Cipollaro, New York.
George G. Deaver, New York.
Ellen Neal Duvall, Richmond, Va.
Mildred Elson, New York.
Harry S. Etter, U. S. Navy.
Salman Faik, Rochester, Minn.
Sara Jane Houtz, Richmond, Va.
Grace Keefe, New York.
LeMoyne C. Kelly, Waterbury, Conn.
Harry Kessler, Bronx, New York.
Robert A. Knight, Baltimore.
A. B. C. Knudson, Washington, D. C.
Peter LaBarba, Hasbrouck Heights, N. J.
Hugo Logemann, Boston.
Leslie London, Hasbrouck Heights, N. J.
Duane D. Love, Sandusky, Ohio.
Margaret Lee Moore, Richmond.
J. M. Moore, Baltimore.
Cecil W. Morgan, Washington, D. C.
Campbell McCullough, Baltimore.
Arthur M. Pruce, Atlanta, Ga.
William D. Robinson, Ann Arbor, Mich.
A. I. Robbins, Baltimore.
Herman L. Rudolph, Reading, Pa.
Roy Schubert, Hasbrouck Heights, N. J.
Marion G. Smith, Chicago.
Richard T. Smith, Philadelphia.
Robertine St. James, Baltimore.
George D. Wilson, Asheville, N. C.
Charles S. Wise, Boston.
Ralph E. Worden, Rochester, Minn.
Catherine Worthingham, New York.
Walter J. Zeiter, Cleveland.

QUESTION AND ANSWER CONFERENCES

Two question and answer conferences will be conducted throughout the week with the cooperation of the Section on Internal Medicine.

Cardiovascular Diseases

The question and answer conference on cardiovascular diseases will be conducted by the American Heart Association in an area adjacent to the Special Exhibit on Cardiovascular Diseases. The chairman of the conference is E. V. Allen, Rochester, Minn. Following is the tentative schedule:

MONDAY, JUNE 9

9 to 11 a. m. *The Use of Anticoagulants in Cardiovascular Diseases.* N. W. Barker, Rochester, Minn., Samuel Levine, Boston, and E. Sterling Nichol, Miami, Fla.

2 to 4 p. m. *The Diagnosis of Congenital Heart Disease.* Herrman L. Blumgart, Boston, and Helen B. Taussig, Baltimore.

TUESDAY, JUNE 10

9 to 11 a. m. *The Peripheral Arterial Diseases.* Wallace M. Yater, Washington, D. C.; Irving S. Wright, New York, and N. W. Barker, Rochester, Minn.

2 to 4 p. m. *The Use of Drugs in Heart Diseases.* Arthur C. DeGraff, New York; Harry Gold, New York, and Howard B. Sprague, Boston.

WEDNESDAY, JUNE 11

9 to 11 a. m. *Surgical Treatment for Vascular Diseases.* Norman E. Freeman, San Francisco; Geza de Takats, Chicago, and J. Ross Veal, Washington, D. C.

2 to 4 p. m. *Problems in Electrocardiography.* Charles T. Wolferth, Philadelphia; Franklin Johnson, Ann Arbor, Mich., and George Burch, New Orleans.

THURSDAY, JUNE 12

9 to 11 a. m. *Hypertension.* Irvin H. Page, Cleveland; M. H. Barker, Rochester, Minn., and J. Q. Griffith, Philadelphia.

2 to 4 p. m. *Rheumatic Fever.* T. Duckett Jones, Boston, and May Wilson, New York.

FRIDAY, JUNE 13

9 to 11 a. m. *Management of the Failing Heart.* Francis C. Wood, Philadelphia; Graham Asher, Kansas City, Mo., and Eugene Stead, Durham, N. C.

Diabetes

The question and answer conference on diabetes will be conducted in a room adjoining the group of exhibits on diabetes by members of the American Diabetic Association, the Diabetes Section of the U. S. Public Health Service and of the George F. Baker Clinic, New England Deaconess Hospital, Boston. The chairman of the group is Howard F. Root, Boston. A regular schedule will be followed each day.

AMERICAN MEDICAL ASSOCIATION

One Hundred Years of Progress

A group of exhibits from the headquarters office of the American Medical Association depicts the progress which has been made since 1847. The exhibits are arranged in chronological order, according to the date of establishment of the various councils and bureaus.

ORGANIZATION OF THE AMERICAN MEDICAL ASSOCIATION—1847. GEORGE F. LULL and members of the Headquarters staff with the cooperation of L. M. TOCANTINS, College of Physicians, Philadelphia:

American Medical Association, 1847-1947: The exhibit shows interesting details of the early days of the Association, the development through the years and the present organization of more than two thousand component county medical societies, fifty-three constituent state and territorial medical societies and the headquarters organization with its House of Delegates, Board of Trustees, councils, bureaus, committees and publications.

BUREAU OF EXHIBITS—1899. THOMAS G. HULL and RALPH P. CREER, with the cooperation of THURMAN B. RICE, Indiana University Medical School, Indianapolis:

Visual Education: The exhibit presents the beginnings of the Scientific Exhibit in 1899, with the subsequent development of the Bureau of Exhibits and the Committee on Medical Motion Pictures. Information about exhibits is presented both for medical meetings and for public gatherings. Information about motion pictures and how to use them is presented. Pamphlets dealing with these subjects will be available.

COUNCIL ON MEDICAL EDUCATION AND HOSPITALS—1904. VICTOR JOHNSON, F. H. ARESTAD, FRODE JENSEN and WILLIAM R. ALBUS:

Progress of Medical Education and Hospitals: The exhibit displays the progress of medical education and hospitals since the organization of the American Medical Association. There is a life chart of all existing and extinct medical colleges in the United States, showing the years of their existence from 1825 to the present day. Another chart illustrates important dates in the history of the Association's endeavors in the improvement of medical schools and hospitals, commencing with the formation of the Committee on Medical Education at the first session of the American Medical Association. The number of institutions approved by the Council are listed and the medical student register and the hospital registry are illustrated. There is a chart showing the expansion of hospital residencies from 1941 to 1947 and a graph showing the number of medical college and medical school graduates since 1800.

COUNCIL ON PHARMACY AND CHEMISTRY—1905. AUSTIN E. SMITH, WALTON VAN WINKLE JR. and HAROLD D. KAUTZ:

Therapeutic Highlights—Past, Present and Future: The exhibit emphasizes the more important advances in medicinal therapeutics that have come within its scope since its establishment in 1905. It includes historic landmarks in therapeutics, illustrations of conditions for which the use of certain prophylactic and therapeutic agents are focused at the present time, and preferred steps in the development of new therapeutic agents in the future. Pamphlets describing these details will be available for distribution.

CHEMICAL LABORATORY—1906. ALBERT E. SIDWELL:

Progress in Drug Analysis: The exhibit includes a comparison of the drugs analyzed by the laboratory forty years ago and the drugs analyzed at the present time. There is a display of old books connected with this work. Emphasis is placed on the work now being done by the Laboratory.

BUREAU OF INVESTIGATION—1906. B. O. HALLING.

Mechanical Quackery of the Past One Hundred Years: The exhibit consists of about twenty gadgets that have been promoted for healing various physical disorders, including such things as the Perkins tractors, the "magic horse-collars," a goiter neck-

lace, the "gas-pipe" fraud, a radium water jar and "medical shoe plates." The exhibit is intended to show that there are no limits to fantastic fakery or to human gullibility and that there have been as preposterous medicomechanical swindles foisted on the public in recent years as there were a century ago.

BUREAU OF HEALTH EDUCATION—1910. W. W. BAUER and W. W. BOLTON:

Health Education by the Medical Profession: The exhibit sets forth highlights on health education by the medical profession as far as it is channeled through this Bureau, with a recognition that the work of many other departments of the Association contributes also to health education. The exhibit includes material on radio, electrical transcriptions, meetings and lectures, cooperation with other agencies, correspondence with the public, television and physical fitness in relation to health.

LIBRARY—1911. MARJORIE HUTCHINS MOORE:

Dispensing Medical Information: The exhibit will feature the package library and periodical lending services, with sample package libraries. A collection of foreign language periodicals received since the end of the war will be on display. The QUARTERLY CUMULATIVE INDEX MEDICUS will also be exhibited, showing particularly photostatic copies of pages covering the references on penicillin, streptomycin and the sulfonamides.

BUREAU OF LEGAL MEDICINE AND LEGISLATION—1922. J. W. HOLLOWAY JR. and GEORGE E. HALL:

Prevention of Malpractice: A photographic representation of situations which might give rise to malpractice claims. Each photograph has an explanatory and cautionary caption. An accompanying file contains abstracts of actual court cases exemplified by the photographs.

COUNCIL ON PHYSICAL MEDICINE—1925. HOWARD A. CARTER and FREDERIC T. JUNG:

Atomic Energy and the Future of Medicine: Charts illustrating some of the basic principles and describing some of the most interesting transformations. There will be a display of apparatus (Geiger counter, oscilloscope) used in the detection of the presence of radioactive elements that are used as tracers.

COUNCIL ON FOODS AND NUTRITION—1929. JAMES R. WILSON:

Food Acceptance Program: The exhibit illustrates some of the things that the Council on Foods and Nutrition has accomplished in this field and some of the things it hopes to accomplish in the future.

BUREAU OF MEDICAL ECONOMIC RESEARCH—1930. FRANK G. DICKINSON:

Medical Economic Research: The exhibit features charts showing a comparison of professional incomes—dentists, physicians, certified public accountants, consulting engineers and lawyers; the increases in the expectation of life at birth during the past century from 40 years in 1847 to 65 years in 1947, and eight selected items of consumer expenditures in the United States for the latest year available (1942), including payments to physicians and all expenditures for medical care in relation to the other selected items.

COUNCIL ON INDUSTRIAL HEALTH—1937. CARL M. PETERSON and HAROLD H. HENNESSY:

Industrial Health—Past, Present and Future: The exhibit consists of drawings on panels depicting industrial medicine in the Ramazzini era, the present modern era and the Atomic era of the future.

COUNCIL ON MEDICAL SERVICE—1944. GEORGE W. COOLEY and HOWARD O. BROWER:

Medical Service: Exhibit featuring the work of the Council and showing the Council's relationship to the physician, the public and the patient. It includes organization and function charts of the Council, examples of state and county medical society activities, picture display of Ten Point Program and charts, maps and other material on prepayment plans. Pamphlets and copies of exhibit material will be available at the booth.

BUREAU OF INFORMATION—1945. VIRGINIA SHULER:

Distribution of Physicians and Rural Medical Service: A 7 by 5 foot map showing by counties the physician distribution throughout the United States will be presented. Listings of areas which have requested physicians will be available for review. A panel prepared by the Medical Department, U. S. Army, will illustrate the transition of doctors from military to civilian life. Facing this panel the Division of Hospital Facilities, U. S. Public Health Service, has prepared a graphic presentation of the Coordinated Hospital System relating the rural clinic to the nearest hospital and on up the line to the university medical center. This system provides a two-way channel of hospital and medical services. The original paintings of "The Family Doctor" by Norman Rockwell will be shown.

COMMITTEE ON NATIONAL EMERGENCY MEDICAL SERVICE—1946. FRANCES TOPIELD:

Physicians' Problems in a National Emergency: The exhibit presents graphically the part that the American physician will play in safeguarding the health and lives of the civilian population of his community in time of national emergency. The exhibit includes the tabulated returns from questionnaires which were sent to 50,000 discharged medical officers and 5,000 physicians who remained at home during World War II. Tables, charts and statistical summaries of the opinions of approximately 28,400 physicians on the subject of military service and civilian medical care are presented.

SECTION EXHIBITS

Each of the seventeen sections of the Scientific Assembly has arranged a group of exhibits dealing with the various branches of medicine.

Section on Internal Medicine

The representative to the Scientific Exhibit from the Section on Internal Medicine is Thomas C. Garrett, Philadelphia.

M. HERBERT BARKER and RICHARD B. CAPPS, Northwestern University Medical School, Chicago:

Infectious Hepatitis: A series of charts, in color, covering the symptoms, physical findings, laboratory tests and liver function tests, hematology, epidemiology and treatment of infectious hepatitis. A comparison of liver function tests made during the course of the disease is illustrated.

GRACE A. GOLDSMITH, Tulane University School of Medicine, New Orleans:

Treatment of Macrocytic Anemia with Pteroylglutamic Acid (Folic Acid): The effect of the administration of pteroylglutamic acid on clinical findings, peripheral blood picture and bone marrow in patients with pernicious anemia, sprue and nutritional macrocytic anemia is illustrated by graphs, charts, photographs and roentgenograms of the gastrointestinal tract. Diagnostic criteria of each of these types of anemia are indicated, and the results of therapy over periods as long as eighteen months are included. Slides illustrating changes in the peripheral blood and bone marrow in response to therapy will be available for microscopic study.

O. C. DURHAM, Abbott Laboratories, North Chicago, Ill.:

Technics in Aerobiology as Applied to Allergy: The essential advances in the study of the dispersal of aeroallergens during the past century are presented. Various pieces of recently developed or adapted apparatus are shown, including the standard exposure device adopted in 1944 by the National Pollen Survey Committee of the American Academy of Allergy. Methods of air sampling, the counting of pollens and fungus spores, the interpolation of gravity slide figures and graphic presentation of statistics are illustrated and demonstrated.

LEON UNGER, HERMAN A. LEVY, ALBERT H. UNGER and ISABELLE BRANDT EISELE, Northwestern University Medical School and Wesley Memorial Hospital, Chicago:

Asthma Through the Ages: Murals depicting scenes which illustrate the highlights in the history of the study of asthma

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are exhibited. One scene is from the ancient and medieval period to 1500 A. D.; one from the preindustrial period (1500-1900 A. D.), and two from the modern and contemporary periods (since 1900 A. D.). Portraits of twenty men who were pioneers in the study of asthma, telling contributions of each, are also shown. The exhibit demonstrates present views regarding etiology, pathology, diagnosis, prevention and treatment of bronchial asthma. The education of the physician and the public is stressed. The display includes a preserved emphysematous lung, and chest x-ray films of asthma and its complications. Kodachrome transparencies of chest abnormalities, positive skin reactions, eosinophilia in blood, sputum and nasal smears, and several causative factors, e. g. molds and weeds, are shown. The technic of scratch and intradermal tests will be demonstrated on patients. Reprints and information leaflets which deal with etiology, diagnosis, differential diagnosis, treatment and results of treatment will be distributed.

EDWARD MATZGER and W. W. WASHBURN, Southern Pacific Hospital, San Francisco, and LEROY ABRAMS, Leland Stanford Jr. University, Palo Alto, Calif.:

Allergy: An evaluation of twenty years of the allergy service of the Southern Pacific Railroad Hospital Department is presented, with study of patients referred for their allergic complaints. The study includes the industrial problems involved, outlining the importance to safe train operation. The methods of pollen surveys and the maps and charts of chronology of pollination are shown. The methods employed and the technic of individual allergic study and the simplified, effective antigen therapy are summarized.

CHARLES A. DOAN, E. VON HAAM and B. K. WISEMAN, Ohio State University College of Medicine, Columbus:

Hypersplenism: Diagnosis, Pathology, Therapy: The clinical and hematologic criteria for recognizing the various hypersplenic states will be demonstrated. The differential splenic histopathology will be illustrated in photomicrographs, with special reference to "primary" versus "secondary" splenic involvement. Evidence for the humoral and/or phagocytic mechanisms in these splenic-bone marrow syndromes will be presented. The results of therapeutic splenectomy, as observed in this clinic during the past seventeen years, will be reviewed.

WILLIAM S. REVENO, Harper Hospital and Wayne University College of Medicine, Detroit:

Antithyroid Therapy: A comparison of the therapeutic action of iodine, thiouracil and propyl thiouracil, alone and combined, based on clinical experience, is presented.

J. RUSSELL TWISS and R. FRANKLIN CARTER, New York Post-Graduate Hospital, New York:

Should Your Patient's Gallbladder Be Removed? Notwithstanding the prevalence of disorders of the gallbladder, there is still no general acceptance of definite indications and contraindications for operation. The exhibit reflects fifteen years' experience of a combined medical and surgical biliary tract clinic. The results of diagnostic methods which have proved of value are presented, stressing the differential diagnosis between functional disorders and organic disease. Further consideration is given to an evaluation of the role played by factors such as infection, obstruction and stone formation. Conclusions as to the indications for medical or surgical treatment are based on diagnostic, operative and follow-up studies in approximately 500 cases.

E. P. MCCULLAGH, R. S. DINSMORE, GEORGE CRILE JR. and ROBERT W. SCHNEIDER, Cleveland Clinic, Cleveland:

Indications for Medical or Surgical Treatment of Hyperthyroidism: Transparencies of patients illustrate examples of various types of hyperthyroidism, accompanied with data regarding treatment recommended and clinical progress both in the cases shown as well as cumulative data relating to the value and limitations of propyl thiouracil.

OTTO STEINBROCKER, NORMAN SPITZER and H. HAROLD FRIEDMAN, Bellevue Hospital, 4th Medical Division, New York University, New York:

The Shoulder-Hand Syndrome: A pictorial description of this syndrome is presented, with illustrations of clinical features, progress and long-range results by black and white and colored transparencies of the patients; x-ray films, oscillometric graphs, venograms and other data are shown.

MICHAEL A. RUBINSTEIN, Montefiore Hospital, New York:

Iliac Crest versus Sternal Bone Marrow Puncture; Diagnostic Importance: Bone marrow studies were performed simultaneously in iliac crest and sternal aspirations in over 200 cases of various hematologic disorders and different cases of cancer. A modified technic of iliac puncture is shown and its advantages are indicated. The comparative value of iliac crest and sternal marrow studies in different affections is reviewed. The iliac crest aspiration has proved to be much more informative than the sternal aspiration in early diagnosis of multiple myeloma and in detection of metastatic lesions in cancer; neoplastic cells were much more frequently recovered from iliac than from sternal aspirations. In some cases the first indication of cancer was furnished by iliac aspiration before the appearance of any clinical or x-ray evidence. Illustrative examples of these findings are presented.

SMITH FREEMAN and C. H. SLOCUMB, Mayo Clinic, Rochester, Minn.:

Vitamin D Poisoning (Hypervitaminosis D) in Human Subjects: The exhibit includes histories, symptoms, clinical, roentgenologic and chemical findings in patients with vitamin D poisoning. The contributing factors, early recognition, course, complications and management are presented.

JOHN D. CURRENCE and F. LEVERNE EBY, Post-Graduate Hospital and Medical School, Columbia University, New York:

Osteoarthritis: The exhibit is a presentation of traumatic, senile, postinfectious and menopausal osteoarthritides with etiology, pathology, prognosis and emphasis on therapy.

HUGO A. FREUND, GABRIEL STEINER and CARL E. DUFFY, Harper Hospital and Wayne University College of Medicine, Detroit:

Recent Advances in Studies of Rheumatoid Arthritis: Photographs, history, laboratory and x-ray findings of cases of rheumatoid arthritis are presented. Pathologic findings at necropsy, especially of nerves and muscles, are demonstrated, and other pathologic evidences of rheumatoid arthritis compared with recent findings of nodular perineuritis and generalized polymyositis. The correlation between clinical and pathologic states are shown and biopsied muscle material from a series of cases of rheumatoid arthritis are presented. Results of recent investigations and comparative studies concerning the etiology of rheumatoid arthritis are presented.

ARTHUR M. MASTER, SIMON DACK, ARTHUR GRISHMAN, HENRY HORN and LEONARD E. FIELD, Mount Sinai Hospital, New York:

Acute Coronary Insufficiency (Without Acute Occlusion): The etiologic factors are those which produce myocardial anoxia, such as effort, operation, anoxemia, acute hemorrhage, severe anemia, shock, pulmonary embolism and tachycardia. The electrocardiogram is chacterized by T wave inversions and ST depressions. Severe coronary insufficiency may result in focal necrosis localized to the papillary muscles and subendocardial layers of the left ventricle. Treatment may be life saving and should be directed to the etiologic factors such as hemorrhage, shock and anoxemia. This disease is quite different from acute coronary occlusion, from which it can be differentiated clinically.

DON CARLOS PEETE, University of Kansas Hospitals, Kansas City:

Psychosomatic Genesis of Coronary Artery Disease: Historical contributions were made to our present understanding of coronary artery disease by Galen, Heberden, Jenner, John Hunter, Pavlov, Krogh, Einthoven, Cannon and Herrick. Clinical study shows importance of environment and early social history in developing a vasospastic reaction pattern that ultimately leads to sclerosis and complicating thrombosis.

IRVING TREIGER, Los Angeles:

Correlative Study of Cardiac Diseases: Correlative study of roentgenograms, electrocardiograms and pathologic specimens in frequently encountered heart conditions to emphasize the correlative clinical value of various methods of examination in diagnosis and treatment of cardiovascular diseases.

(This work was done at the University of Illinois College of Medicine and Presbyterian Hospital, Chicago.)

WILLIAM DRESSLER, Israel Zion Hospital, Brooklyn, and HUGO ROESLER, Temple University Hospital, Philadelphia:

Advances in the Electrocardiographic Diagnosis of Myocardial Infarction: Exhibit showing (1) the role of multiple chest leads in the diagnosis of myocardial infarction; (2) high T waves, an early sign of myocardial infarction; (3) an electrocardiographic pattern of septal infarction which extends from the anterior to the posterior aspect of the heart; (4) reciprocal changes of ST and T in the chest leads from right side and left side positions; (5) the significance of the pattern $T_1 < T_3$ for the diagnosis of myocardial infarction; (6) myocardial infarction associated with bundle branch block; (7) myocardial infarction associated with left ventricle hypertrophy; (8) changes in the electrocardiogram which simulate myocardial infarction but which are caused by pendulous heart, pulmonary emphysema or a large breast; (9) an attempt at evaluation of the electrocardiogram for the prognosis in myocardial infarction; (10) serial electrocardiographic tracings in myocardial infarction.

HENRY B. KIRKLAND, A. M. LYLE and C. E. KIESSLING, Prudential Insurance Company, Newark, N. J.:

The Abnormal Thoracic Aorta and Its Prognostic Significance: A correlation of x-ray findings, electrocardiographic changes and the clinical course in individuals with roentgenologic evidence of aortic atheromatosis is shown. The development of intimal calcification is demonstrated. Studies bearing on ultimate prognosis are presented. Emphasis is laid on the importance of correct evaluation of findings, and films illustrating diagnostic pitfalls are shown.

GEORGE E. BURCH and PAUL REASER, Tulane Medical School, New Orleans:

Radio Elements and Mechanism of Congestive Heart Failure Radiosodium (Na^{24} and Na^{22}): Studies in patients with various degrees of congestive heart failure and control subjects showed a considerable disturbance in sodium excretion in congestive failure. There was a much more prolonged retention of Na^{22} in CHF than in the normal subject. Mercurial diuretics increased the rate of Na^{22} excretion. In congestive heart failure the degree of renal tubular reabsorption of Na is greatly increased over the normal. Other edema states of renal origin tend to show an Na pattern similar to that in congestive heart failure. The physiologic and therapeutic significance of these findings is indicated.

J. Q. GRIFFITH JR., M. A. LINDAUER, R. L. SHANNO and E. ROBERTS, University of Pennsylvania, Philadelphia:

Hyperpituitarism Causing Arterial Hypertension: Diagnosis and Treatment: Illustrations and models are used to demonstrate the bioassay methods for antidiuretic hormone of the posterior lobe of the pituitary and gonadotropic hormone of the anterior lobe. The effect of anterior lobe hormones in producing increased activity of the posterior lobe in susceptible animals is described, and the analogy indicated with human hypertension occurring at the menopause or during pregnancy. Results of therapy are shown (1) by pituitary irradiation, (2) by repeated injections of pitressin tannate in oil, probably with the production of an antihormone state, (3) by sex hormone therapy.

DAVID AYMAN and ARCHIE D. GOLDSHINE, Beth Israel Hospital, Boston:

Therapeutic Methods in Essential Hypertension: Charts of patients studied in the past ten years show carefully followed blood pressure levels, both at the clinic and in many cases by home readings under treatment with placebos, sedatives, thiocyanates, low sodium diet, rice-fruit-sugar diet, vitamin K, testosterone and sympathectomy.

LIEUT. L. MARTIN GRIFFIN JR., M. C., and LIEUT. FRED I. GILBERT, M. C., Stanford University School of Medicine and Veterans Administration, Palo Alto, Calif.:

Glomerular Nephritis—Recognition and Treatment: The exhibit presents the dynamic concept of glomerular nephritis with diagrams illustrating the progression of the disease through the initial, latent, degenerative and terminal stages. To accomplish this, charts and photographs correlating the clinical picture of glomerular nephritis with pathologic changes of the blood, urine and kidneys are used. This includes photomicrographs and drawings of kidney sections and urinary sediment during various stages of the disease. Simple clinical laboratory methods for determinig the activity and progression of the renal lesion are demonstrated. Treatment and management of the different stages are outlined in terms of renal pathologic change.

T. J. DRY, J. E. EDWARDS, R. L. PARKER, H. B. BURCHELL and H. M. ROGERS, Mayo Clinic, Rochester, Minn.:

Congenital Anomalies of the Heart and Great Vessels; Clinicopathologic Correlation: Representative examples of major anomalies of the heart and great vessels are presented by models showing external anatomy as well as internal structure of the various types encountered; drawings explaining the abnormal circulation; roentgenograms and electrocardiograms of the various types; pertinent clinical features observed in each type; significant embryologic considerations contributing to these congenital anomalies.

EDWARD M. KENT, GEORGE J. KASTLIN and THERON B. CHILDS, Pittsburgh:

Solitary Pulmonary Abscess Occurring with Bronchogenic Carcinoma: Translites of roentgenograms and operative specimens are presented to illustrate the location and characteristics of solitary pulmonary abscess due to bronchogenic carcinoma, resulting from (1) bronchial obstruction or (2) central necrosis, infection and excavation within the carcinoma. These lesions simulate closely the more commonly recognized solitary pyogenic abscess of other origin. Recognition of these lesions as a complication of bronchogenic carcinoma is necessary so that treatment of the primary tumor is not delayed. The clinical importance of history, symptom complex, bronchoscopy and biopsy is presented. The pulmonary lesions usually associated with bronchogenic carcinoma are demonstrated such as pulmonary atelectasis, diffuse pulmonary suppuration and solitary pulmonary mass.

ROBERT L. MCMILLAN, J. P. ROUSSEAU and J. C. WIGGINS, Bowman Gray School of Medicine of Wake Forest College, and North Carolina Baptist Hospital, Winston-Salem, N. C.:

Pulmonary Infarction: The exhibit consists of charts, posters, photographic reproduction of typical roentgenograms, drawings of the pulmonary circulation, heart and lungs, and drawings of the venous circulation from the legs to the vena cava with thrombi and emboli illustrated. A new physical sign is described.

HENRY SCHWERMA and A. C. IVY, Northwestern Medical School and University of Illinois College of Medicine, Chicago:

Resuscitation from Asphyxia: The results of controlled experiments designed to determine the best method for resuscitation from carbon monoxide and obstructive asphyxia are presented. Evidence supporting such statements as the following is presented: The heart is the critical organ in relation to immediate survival and the brain in relation to the occurrence of significant sequelae following resuscitation. The incidence of neurologic sequelae is related to the degree and duration of the anoxia. The percentage of immediate survivals and the incidence of neurologic sequelae is the same whether 100 per cent oxygen or 7 per cent carbogen is used. The important point in treating asphyxia is to oxygenate the blood as quickly as possible in order to revive the failing heart and to stop the delcterious effects of anoxia on the brain cells.

K. J. HENRICHSEN, Municipal Tuberculosis Sanitarium, Chicago:

Diseases of the Lungs—Differential Diagnosis in Tuberculous and Nontuberculous Conditions Encountered in the Sanitarium:

History and roentgenograms of cases, with pathologic specimens demonstrating diseases of the lungs, tuberculous and nontuberculous, differential diagnosis and treatment.

WILLIAM DAMESHEK and S. ESTREN, J. H. Pratt Diagnostic Hospital, Tufts College Medical School and Boston Dispensary, Boston:

The Spleen and Splenic Syndromes: Spleen-bone marrow relationships are brought out by various types of experiments, including splenectomy and parabiosis and by the clinical and laboratory findings in various pathologic conditions. Splenomegaly is often associated with anemia, leukopenia or thrombocytopenia or with various combinations of these. The bone marrow under such conditions is hyperplastic, suggesting a "block" between the marrow and the circulating blood. The "blocking" organ appears to be the spleen, as judged by the results of splenectomy. Various syndromes of "hypersplenism" may be discriminated. These may be total, with pancytopenia, or selective with anemia, leukopenia or thrombocytopenia. Idiopathic thrombocytopenic purpura, splenic neutropenia, splenic pancytopenia and certain types of hemolytic and nonhemolytic anemia are examples of various types of splenic syndromes. Recognition of these syndromes by careful blood and other examinations is all important, since splenectomy may lead to complete recovery.

Section on Surgery, General and Abdominal

The representative to the Scientific Exhibit from the Section on Surgery, General and Abdominal, is Warren H. Cole, Chicago.

J. ROSS VEAL, Georgetown University Medical School, Washington, D. C.:

Hyperhidrosis—Surgical Management: Charts, colored photographs, descriptive drawings of the etiology, symptomatology, course and treatment is presented, and the relation of excessive sweating to other vascular conditions is shown.

THOMAS A. SHALLOW, SHERMAN A. EGER, and FREDERICK B. WAGNER JR., Jefferson Medical College, Philadelphia:

Modern Concepts of Acute Pancreatitis: All phases of this subject are presented and amply illustrated from a personal series of 50 cases. Special emphasis is placed on methods of early diagnosis and proper management from both medical and surgical points of view.

LESTER R. DRAGSTEDT, PAUL V. HARPER, EDWARD R. WOODWARD, E. BRUCE TOVEE and AUGUSTIN RODOLFO, University of Chicago Medical School, Chicago:

Gastric Vagotomy in the Treatment of Peptic Ulcer: Photographs, charts and diagrams illustrate the physiologic basis for gastric vagotomy in the treatment of peptic ulcer. Experimental evidence indicates that pure gastric juice has the capacity to digest all living tissue, including the mucous membrane of the stomach, duodenum and jejunum. A gastric content which approximates the composition of pure gastric juice accumulates in the stomach under conditions in which the alkaline duodenal secretions fail to reach the intestine or when there is an excessive secretion of gastric juice either in response to the ingestion of food or in the empty stomach. The latter situation most often obtains in patients with peptic ulcer and is a major factor in the cause of the disease. An excessive continuous secretion of gastric juice in the stomach of ulcer patients is shown, and this excessive secretion is abolished by section of the vagus nerves to the stomach. Data also are presented from the experimental laboratory indicating the effect of vagus section on the total output of acid from the stomach of experimental animals. The effect of vagotomy on gastric sensation and on other gastrointestinal functions is described.

KEITH S. GRIMSON, G. J. BAYLIN, H. M. TAYLOR, F. H. HESSER and R. W. RUNDLES, Duke Hospital, Durham, N. C.:

Transthoracic Vagotomy for Peptic Ulcer: Transthoracic vagotomy has been performed on 57 patients observed from nine to thirty-six months. The clinical results and the effect on the secretions and the motility of the stomach are presented. The possible role of chemical or nervous mechanisms in the causation of ulcer is considered. Particular emphasis is placed on the complications such as retention and diarrhea that occurred after vagotomy.

I. A. BRUNSTEIN, Stuyvesant Polyclinic, New York:

Critical Evaluation of the Trendelenburg Test: Evaluation of the Trendelenburg test based on the anatomic distribution of varicose veins in the lower extremity is made. Criteria for the selection of the proper method of treatment of individual cases of varicosities are presented. An appliance with which to execute the Trendelenburg test in cases with wide distribution of varicose veins is shown.

DONALD C. BEAVER and WILLIAM E. JOHNSTON, Woman's Hospital, Detroit:

Tumors of Lateral Aberrant Thyroids: Lateral aberrant thyroid tumors are of sufficient clinical importance and occur frequently enough to warrant a better understanding of their pathogenesis, pathology and clinical behavior. The complete story of these tumors, including historical sketch, embryology, pathogenesis, medical and surgical survey, diagnosis, treatment, pathology, postoperative follow-up and summary, is given, with the presentation of 6 cases. The exhibit is prepared on 5 by 7 inch transparency film.

E. L. MACQUIDDY, University of Nebraska College of Medicine, Omaha:

Absorbable Powder Tissue Reactions and Physical Properties: Results obtained with an absorbable powder showing tissue reactions obtained by intraperitoneal and tissue implantation and insufflation are demonstrated. Both short and long term experiments are represented. Allergenic properties are reported. This is a processed starch, studied as a glove, dressing and dusting powder.

MEYER O. CANTOR, Grace Hospital, Detroit:

Simplified Intestinal Decompression Tube: Roentgenograms demonstrate that a simplified single lumen intestinal decompression tube is the most efficient instrument to produce intestinal decompression. A life size plaster model with the gastrointestinal tract constructed of glass has been made. In this way it can be demonstrated how gravity is utilized in this type of tube, which was constructed to utilize the physical properties of mercury to the utmost, i. e. weight, lability and cohesive force. To utilize these properties fully a different technic in passing these tubes will be demonstrated.

A. H. BULBULIAN, Mayo Clinic, Rochester, Minn.:

Prosthesis of the Face and Hands: Methods, material and equipment used in the reconstruction of the nose and ear, hands and fingers by the prosthetic means. Examples of representative types of such reconstruction in colored transparencies. Steps of the technic from taking the impression up to the preparation of the finished prosthesis will be shown.

W. M. ADAMS, Memphis, Tenn.:

Free Composite Grafts of the Nipples in Mammary Plasty: The exhibit shows pictures of cases before and after operation as well as pictures and drawings illustrating the procedure.

JAMES BARRETT BROWN, LOUIS T. BYARS, FRANK MCDOWELL and MINOT P. FRYER, Washington University School of Medicine, St. Louis:

Repairs in Plastic Surgery by Single Operations: Representative lesions requiring plastic surgery that may be repaired in a single operation are shown and the results of the single operation are recorded. This is to call attention to the fact that not all lesions requiring plastic surgery demand long periods of hospitalization and multiple operations. In many instances this depends on the use of a free graft rather than a flap, or the use of local available tissue rather than a distant flap or a graft. The economic and hospital space saving is an important result.

NICHOLAS A. MICHELS, Daniel Baugh Institute of Anatomy, Jefferson Medical College, Philadelphia:

Arterial Variations—Liver, Gallbladder, Stomach, Duodenum Pancreas and Spleen: A demonstration of the variations in the

arterial blood supply of supramesocolonic organs as ascertained by dissections of the cadavers at the Daniel Baugh Institute of Anatomy, Jefferson Medical College, is presented. Detailed dissections were made previous to student dissection in 100 bodies for the spleen and in 200 bodies for the other organs. In every instance a drawing was made of the existent arterial variation, no two patterns being the same. Charts with appended explanatory notes and a group of wet specimens show the most striking variations.

GEORGE M. DORRANCE, J. W. BRANSFIELD, S. GORDON CASTIGLIANO and A. J. DONNELLY, American Oncologic Hospital, Philadelphia:

Reparative Surgery and Its Place in the Treatment of Malignant Growths: Indications for reparative surgery in the management of malignant neoplastic disease involving the skin of the scalp, face, breast and extremities, mouth and jaw are demonstrated. The influence of radiation therapy on reparative surgery is brought out, and the difference in the management of the cancer case and the traumatic case is emphasized.

WILLIAM LAW WATSON and JOHN L. POOL, Memorial Hospital, New York:

Silent Intrathoracic Tumors—Discovery and Management: This material is derived from a relatively large group of asymptomatic patients in whom demonstrable intrathoracic tumors were discovered by chance radiographic examination carried out in the screening of large numbers of healthy young adults. A high percentage of the total number of cases in this series occurred in navy personnel and were discovered during routine radiographic chest examination. Representative cases are demonstrated by (1) preoperative chest x-rays, (2) colored transparencies of the gross operative specimen and (3) photomicrographs in color. The object and purpose of the presentation are to emphasize the need for routine, periodic chest x-ray examination for all young adults.

HERBERT WILLY MEYER, Tumor Clinic, New York Post-Graduate Medical School and Hospital, New York:

Cancer of the Head and Neck: The lymphatic drainage of lip and tongue cancer is shown, as well as cancers of the head and neck of patients before operation, surgically removed specimens and patients after operation with follow-up. Literature describes the basis of the principles of therapy of cancer of the head and neck as performed at the Tumor Clinic of New York Post-Graduate Hospital.

LEONARD B. GOLDMAN, Queens General Hospital, and ABRAM BELSKIE, Sculptor Academy of Medicine, New York, Queens County Cancer Committee, Jamaica, L. I.:

Teaching Cancer by Models: Life size medical sculptures in full color with interchangeable parts demonstrating anatomy and varieties of neoplasms, with emphasis on early cancer. Different consistencies of the rubber permit palpation. The exhibit includes sculptured pieces of the head and neck, breast, prostate and bladder, female pelvic organs and torso, with removable organs of the thorax and abdomen.

JACOB J. WEINSTEIN, George Washington University Medical School, Washington, D. C.:

Protein Metabolism in Surgery; Use of Oral and Parenteral Protein Hydrolysate: Charts show (1) incidence of hypoproteinemia preoperative, (2) blood changes after operation, (3) mechanism of hypoproteinemia and clinical manifestations, (4) postoperative nitrogen balance studies, (5) postoperative nitrogen balance studies with intravenous protein hydrolysate, (6) postoperative nitrogen balance studies with oral protein hydrolysate, (7) effects of intravenous, subcutaneous, intramuscular and oral protein hydrolysate on blood and urine (8) and reactions with parenteral administration.

L. E. HOLMGREN, Jackson Clinic, Madison, Wis.:

Varicose Veins—Diagnosis and Treatment: Charts and drawings explain the necessity of individualization of each case for determining the proper type of therapy to use. Anatomic drawings and drawings which illustrate a special diagnostic test are shown. Charts and moulages illustrate surgical steps in the high ligation of the saphenous vein. Charts and moulages also illustrate the treatment of varicose ulcers. The end results of some 700 cases are presented.

JOHN O. BOWER, Foundation for Clinical and Surgical Research, Philadelphia General Hospital, Philadelphia:

Hyperplasia—Hyperplasia in the Healing of Injured Tissue as Affected by Hemoglobin, Foreign Bodies, Foreign Proteins and Other Chemical Compounds, Poisonous and Nonpoisonous, Absorbable and Nonabsorbable: Photomicrographs show early and progressive hyperplasia followed by normal tissue regression and repair after embedding sutures impregnated with hemoglobin; encapsulative hyperplasia following the embedding of nonabsorbable sutures—silk, cotton and linen; delayed hyperplasia following the embedding of plain surgical gut (foreign protein) and delayed atrophic hyperplasia following the embedding of chromicized gut. Photographs and photomicrographs show: (1) A new method of determining the cellular response to nontoxic and toxic absorbable and nonabsorbable compounds. The nontraumatic liver contact response to plain, chromicized and hemoglobin impregnated sutures in powder form, the sulfonamides, tannic acid, gauze, silk, cotton, linen, gallstones and other absorbable and nonabsorbable material. (2) The hemoglobin electrolyte stroma solution for treatment of burns—a new method for the treatment of the initial shock, the prevention of secondary shock and infection and the promotion of early epithelization. (3) The use of hemoglobin electrolyte stroma solution combined with penicillin in the management of compound fractures. (4) The use of hemoglobin electrolyte stroma penicillin solution in the preparation of the epidermis for surgical procedures.

EDGAR J. POTH, L. J. MANHOFF JR. and JOSEPH P. MCNEILL, University of Texas Medical Branch, Galveston, Texas:

Healing of Bowel, as Influenced by Succinylsulfathiazole and Phthalylsulfathiazole: An experimental demonstration of the influence of the intestinal bacterial flora on the healing process following bowel suture is presented. The subject matter is illustrated by drawings and gross and microscopic color photographs of control preparations contrasted with the findings after modifying the bacterial flora of the bowel by the administration of succinylsulfathiazole and phthalylsulfathiazole.

STUART W. HARRINGTON, HOWARD K. GRAY and O. THERON CLAGETT, Mayo Clinic, Rochester, Minn.:

Surgical Treatment of Certain Intrathoracic Lesions: The exhibit deals with diagnosis and surgical treatment of (*a*) lesions of the esophagus such as benign and malignant tumors and esophageal and pharyngeoesophageal diverticula; (*b*) extrapulmonary lesions such as neurofibromas, teratomas and thymoma; (*c*) intrapulmonary lesions such as carcinomas of the lung and bronchus, bronchial adenomas, hamartomas and pulmonary suppurative diseases; (*d*) cardiac lesions such as chronic constrictive pericarditis and patent ductus arteriosus.

CHAMP LYONS, H. S. MAYERSON and PAUL T. DECAMP, Tulane University, New Orleans:

Chronic Shock, the Problem of Reduced Blood Volume in the Chronically Ill Patient: The surgically significant feature of protein depletion is a reduced blood volume. Deficiencies of total circulating hemoglobin frequently outweigh deficiencies of tissue protein. These features have been correlated in a syndrome of "chronic shock." The exhibit presents the evidence validating quantitative aspects of transfusion therapy. It is shown that correction of blood volume preoperatively is a clinically practical method of preparing the patient with protein depletion for any needed operation. Increased dietary protein is reserved for especial emphasis in the postoperative care of patients after surgical correction of the etiologic factors contributing to protein depletion.

BERNARD JUDOVICH, WILLIAM BATES and MAURICE JACOBS, Graduate School of Medicine, University of Pennsylvania, Philadelphia:

Scalenus Anticus Syndrome: Etiology, anatomy, symptoms, physical signs, differential diagnosis and treatment are shown.

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There are presentations of a hypodermic needle technic for diagnostic and therapeutic infiltration, atypical cases of scalenus anticus syndrome, primary and secondary scalene syndromes and differentiation, and cases simulating the pain of coronary diseases, electrocardiograph changes induced by compression of the subclavian artery, brachial plexus and suggested mechanism for postcoronary shoulder pain.

E. S. GURDJIAN, J. E. WEBSTER and H. R. LISSNER, Wayne University College of Medicine and Grace Hospital, Detroit:

Mechanism of Production of Linear Skull Fracture. Studies with the Stresscoat: This material consists of experimental work in dogs, monkeys and human studies on cadaver and dry skulls with the Stresscoat technic. A strain sensitive lacquer is applied on the external and internal surfaces of the skull; deformation of the skull from blows causes cracks in the lacquer, showing the pattern and direction of the strains. It has been shown that the skull of the dog and the monkey under pentobarbital sodium anesthesia has strain patterns similar to the dry skull in the same animal. The strain patterns of human cadaver skulls and dry skulls are also similar. When both the external and internal surfaces are available for study, bending activity of the skull can be visualized. Following impact there is an area of inbended bone. Peripheral to this region there is selective outbending of the skull, as shown by the Stresscoat technic. Linear fractures are initiated at a distance from the point of impact and result from outbending of the bone. The fracture line propagates toward the point of impact and in the opposite direction.

ARKELL M. VAUGHN, JOHN W. HOWSER and WILLIAM M. LEES, Mercy Hospital and Loyola University School of Medicine, Chicago.

Surgery of the Stomach: History of gastric surgery from Bilroth's number 1 gastrectomy in 1881 to Dragstedt's vagus nerve resection in 1943 is shown. Indications and contraindications for gastroenterostomy, gastric resection, gastrostomy, gastrotomy and so on are demonstrated. Diagrams and sketches show the various types of operative procedures and other charts showing roentgenograms before and after surgery of the stomach.

JAMES L. POPPEN, the Lahey Clinic, Boston:

Neurosurgery: This exhibit covers intracranial aneurysms with results based on 103 verified cases. It shows colored photographs of actual specimens with data regarding handling of cases. Hypertension is taken up from the point of view of the surgeon with operative technic of splanchnicectomy shown by drawings. Photographs of splanchnic nerves resected intact and data regarding indications and contraindications of treatment are presented.

BOWMAN C. CROWELL, MALCOLM T. MACEACHERN and GEORGE H. MILLER, American College of Surgeons, Chicago:

One Hundred Years' Progress in the Development of Cancer Detection Centers, Hospitals and Surgery: The exhibit demonstrates certain scientific and educational phases of the work of the American College of Surgeons, including cancer detection centers, hospitals and surgery.

Section on Obstetrics and Gynecology

The representative to the Scientific Exhibit from the Section on Obstetrics and Gynecology is Frederick H. Falls, Chicago.

JOE V. MEIGS, RUTH M. GRAHAM, MAURICE FREMONT-SMITH, SOMERS H. STURGIS, DELORIS CHAPMAN and MARJORIE SOULE, Vincent Memorial Hospital, Massachusetts General Hospital, Boston:

Carcinoma of the Cervix: A New Method of Prognosis: The vaginal smear from cases of cervical carcinoma during irradiation shows pronounced and characteristic changes. These have been shown to have prognostic value. The presence of the typical reaction of both normal and malignant cells to radiation may be regarded as a good response and the absence of the reaction as a poor response. Clinical follow-up of these cases has confirmed this prognosis. Photomicrographs of the cellular changes, charts and case reports are presented to demonstrate the importance of the vaginal smear in the prognosis of carcinoma of the cervix treated with radiation.

MILTON S. SACKS, WILLIAM KUHNS and ELSA JAHN, University of Maryland School of Medicine, Baltimore Rh Typing Laboratory, Baltimore:

Studies in Rh Isoimmunization in Pregnancy: The Baltimore Rh Typing Laboratory, sponsored by the Obstetrical and Gynecological Section of the Baltimore City Medical Society and established in August 1945, was intended to serve as a central laboratory for Rh studies on the pregnant patients of any physician in the community. Approximately twelve to fifteen hundred women are being studied per month. The method of operation of this community service will be described. Quantitative and qualitative antepartum and postpartum antibody studies and their correlation with outcome of pregnancy will be presented.

WILLIS E. BROWN, JAMES T. BRADBURY and A. F. JENNINGS, University of Iowa, Iowa City:

Comparative Studies of Radiopaque Substances Used for Salpingography: The exhibit shows roentgenograms of five currently used commercial products to demonstrate their effectiveness in casting radiographic shadows, their time of absorption from the pelvis, microscopic studies of the human tubes removed after such studies, gross and microscopic studies of the rabbit tubes following the injection of these agents and a collection of the unusual intrauterine pathologic changes delineated by these methods.

A. HERBERT MARBACH, Jewish Hospital, Philadelphia:

The Infected Cervix—Pathology and Treatment: Moulages of two pelves are shown with vaginal specula in situ. There is a control dial on each moulage which, when rotated, brings the various types of infected cervices into view on the one moulage and the types of treatment and the postoperative course on the other moulage. The histopathology of the cervix preoperatively and every day postoperatively until healing takes place is also presented, with emphasis on the use of conization as an ideal method for treating the infected cervix. The follow-up treatment is stressed, with the use of chemotherapeutic agents in promoting more rapid healing.

BERNARD BERGLAS and I. C. RUBIN, Mount Sinai Hospital and New York University Medical School, New York:

The Supporting Mechanism of the Uterus; Anatomic and Functional Principles (Based on the Study of Gross and Microscopic Anatomy of Pelvic Connective Tissue and X-Ray Myography of the Levator Ani Muscle): Transparencies show (1) full life size sections of pelvis with latex injected blood vessels and (2) anatomic and functional characteristics of the levator ani muscle in the living subject, as determined by intramuscular injection of radiopaque solution.

A. P. HUDGINS, Charleston, W. Va.:

Modifications in Technic for Perineal Repair: Variations are presented in technic in the perineal repair which accomplish (1) ease and precision in accomplishing an anatomic dissection, (2) minimum blood loss and (3) good exposure and identification of tissues for accurate approximation. The technic is applicable when tissues are friable, postoperative healing is satisfactory and it is time saving.

HERBERT KUPPERMAN and ROBERT B. GREENBLATT, University of Georgia School of Medicine, Augusta, Ga.:

The Two Hour Pregnancy Test: The evolution of the two hour pregnancy test is presented and the technic depicted in charts, pictures and paintings. The physiologic basis of the hyperemic reaction is discussed and data are presented to indicate the role of the luteinizing and luteotrophic hormone in producing ovarian hyperemia. A comparison of the accuracy of the two hour test with that of the Friedman test is made. The advantages of the two hour test are enumerated and compared with those of the other tests. Charts are presented on the three

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most popular tests now in use and a short description is given of the performance of these tests.

PAUL F. FLETCHER, St. Louis University School of Medicine and the St. Louis County Hospital, St. Louis:

Abdominal Colpocystopexy for Complete Prolapse of the Bladder and Vagina: The rectus suspension principle of operative treatment for complete prolapse of the bladder and vagina following panhysterectomy is presented in detail. Living fascial strips mobilized from the anterior sheath of the rectus muscle on each side are employed in such a manner as to effect permanent restoration of the normal anatomic relationships of these viscera in the pelvis. A crossed suspender support is thus provided for both bladder and vagina, but may be applied to the bladder alone when ventral fixation of the vaginal vault is to be preferred. A case showing each step in the operative technic is presented graphically and in colored pictures. The analysis of a five year follow-up study of results obtained is included.

KARL JOHN KARNAKY and FRANK POCHE, Jefferson Davis Hospital, Houston, Texas:

Lesions of Vulva, Vagina and Cervix: Photographs of various lesions of the vulva, vagina and cervix are presented, together with models of various lesions of labia, vagina and cervix. An attempt to establish the relation of the hydrogen ion concentration (p_H) to various lesions of vagina and cervix is shown.

F. H. FALLS, University of Illinois College of Medicine, and CHARLOTTE S. HOLT, Illinois State Department of Public Health, Chicago:

Puerperal Sepsis: Moulages, models, drawings, photomicrographs, charts and graphs depicting the etiology, pathology, diagnosis and treatment of various forms of puerperal sepsis are shown. The subject of puerperal sepsis is presented as part of the program of visual education in Illinois. It is a cooperative educational program between the State University and the State Department of Public Health and is used in the instruction of undergraduate and postgraduate medical students, interns and nurses throughout the state.

Section on Ophthalmology

The section exhibit committee of the Section on Ophthalmology consists of Georgiana D. Theobald, Oak Park, Ill., chairman; Derrick Vail, Chicago, and A. B. Reese, New York.

C. S. O'BRIEN, LEE ALLEN, JAMES H. ALLEN and SHERWOOD P. BURR, State University of Iowa College of Medicine, Iowa City:

Gonioscopy: Drawings show various chamber angles as seen with the Allen prism gonioscope. Models and diagrams demonstrate the principles of this gonioscope.

ALBERT D. RUEDEMANN and OTTO GLASSER, Cleveland Clinic, Cleveland:

Use of Radium in Ophthalmology: The various uses of radium in ophthalmology and the end results to be expected are shown.

ABRAHAM L. KORNZWEIG, Mount Sinai Hospital, New York:

Embryonic Development of the Human Cornea, Sclera and Corneoscleral Junction: Photomicrograph transparencies show the embryonic development of the human cornea, sclera and corneoscleral junction from the fourth week of embryonic life up to term. The importance of the corneoscleral junction in the development of the anterior segment of the eye is emphasized. The different rates of growth of the different sections of the sclera are shown, together with their possible relationship to the clinical development of myopia. The congenital anomalies of the cornea and sclera are presented, and a graph exhibiting the differences in the rate of growth of the cornea and the sclera is included.

HUNTER H. ROMAINE, New York Eye and Ear Infirmary and New York University Reading Clinic, New York:

Reading Disabilities: Some of the various concepts of the causes of reading disability and the present trend in treating this disability are presented. Many factors are concerned, and this exhibit attempts to consolidate the picture as far as it is possible, placards and photographs being used to indicate the methods of approach.

FRANKLIN M. FOOTE and FLORENCE NELSON, National Society for the Prevention of Blindness, Inc., New York:

Causes of Blindness: Three large panels, illustrated, show leading causes of blindness and indicate problems in research and education which are of most importance in prevention of blindness programs.

ERNEST SHEPPARD, George Washington University School of Medicine, Washington, D. C.:

A Simple Technic of Low Magnification Gonioscopy: Gonioscopic drawings and demonstration with the Obrig gonio lens show a simple technic of low magnification gonioscopy.

ADOLPH POSNER, ABRAHAM SCHLOSSMAN and OTTO LOWENSTEIN, New York:

Practical Points in the Diagnosis and Management of Glaucoma: The exhibit consists in demonstration of (1) standardized simplified tangent screen unit for quantitative field studies; (2) model of a modified Schiötz tonometer, together with the technic of tonometry; (3) pedigrees of glaucoma families to emphasize the importance of careful history taking; (4) charts illustrating the course of primary glaucoma in patients followed over periods of five to thirty years, and (5) pupillographic studies in glaucoma.

PETER KRONFELD and H. ISABELLE MCGARRY, Illinois Eye and Ear Infirmary and College of Medicine, Chicago:

A Five Year Follow-Up of Glaucomas: The exhibit is based on a follow-up study over a period of at least five years of a representative number of so-called primary glaucomas and of glaucomas secondary to cataract extraction.

Section on Laryngology, Otology and Rhinology

The representative to the Scientific Exhibit from the Section on Laryngology, Otology and Rhinology is Paul H. Holinger, Chicago.

JULIUS LEMPERT, PHILIP E. MELTZER and LEROY SCHALL, Massachusetts Eye and Ear Infirmary, Boston, and DOROTHY WOLFF, New York:

Surgical Treatment of Clinical Otosclerosis: A. Histology and pathology. Photomicrographs at fenestrations of monkeys show natural process of bone regeneration and results of attempts to present it; human ossicles removed at the fenestration operation show degenerative changes; photomicrographs of bony lid of fenestra, cartilage stopple, petrasa showing Jacobson's nerve and ganglions are shown with microscopic slides of these subjects. B. Restoration of practical and serviceable unaided hearing. Cadaver specimens show each individual step of the fenestra for ovalis operation; drawings depict the continuance solution of fenestration surgery; demonstration of Lempert visatron for projecting the surgical field for teaching purposes; demonstration of Lempert scope for taking motion pictures of surgical field.

LOUIS H. CLERF and PETER A. HERBUT, Jefferson Hospital, Philadelphia:

Progress in Diagnosis of Bronchogenic Carcinoma: Progress in the diagnosis of bronchogenic carcinoma during the past twenty-five years is shown, together with instruments developed and used during this period, and statistical studies of diagnosis and their influence on treatment. The results obtained by cytologic study are included.

JAMES S. GREENE, National Hospital for Speech Disorders, New York:

Treatment of Speech and Voice Disorders: Photographs illustrate diagnostic and therapeutic procedures carried out in a model speech clinic. A series of lantern slides of facial para-

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kinesias associated with stuttering and of various oral and laryngeal defects associated with other speech and voice disorders are shown.

GEORGE E. SHAMBAUGH JR., ARTHUR L. JUERS and CHARLES WHITAKER, Chicago:

Fenestration Operation: New Improved Technic based on Experimental Studies: Exhibit of photomicrographs show the factors that influence osteogenesis and labyrinthitis after experimental fenestration of the labyrinth in the monkey. Models show the technic of the new improved fenestration operation. Charts show the history of the fenestration operation, indications and results.

J. BROWN FARRIOR, Ochsner Clinic, Tulane Medical School, New Orleans:

Ear Surgery: Anatomic dissections of ear operations with accompanying anatomic drawings and explanatory descriptions are shown. The classic ear operations and the modern advances in the surgical treatment of deafness, facial paralysis and Ménière's disease are demonstrated, together with the simple mastoidectomy, the complete mastoidectomy, the radical and modified radical mastoidectomy, the fenestration operation for otosclerosis, petrous apicectomies, decompression, grafting and rerouting of the facial nerve, labyrinthectomy and electrocoagulation of the labyrinth for Ménière's disease.

GORDON B. NEW, F. A. FIGI, F. Z. HAVENS and JOHN ERICH, Mayo Clinic, Rochester, Minn.:

Cancer of the Larynx—Methods of Treatment and Results: The exhibit is divided into four parts: (1) diagnosis of cancer of the larynx; (2) treatment of laryngeal cancer by suspension laryngoscopy and thyrotomy; (3) treatment of laryngeal cancer by laryngectomy, and (4) statistical analysis of cancer of the larynx. Various phases of diagnosis and treatment of cancer are depicted by means of photographs, photomicrographs and models.

CHEVALIER L. JACKSON, CHARLES M. NORRIS and WALTER MALONEY, Temple University Hospital and School of Medicine, Philadelphia:

Foreign Bodies in the Air and Food Passages and Their Role in the Development of Bronchoesophagology: The history of bronchoscopy and esophagoscopy is presented in outline form, and specimens of early instruments are shown. Salient features of disease of foreign body origin are presented from point of view of etiology, symptomatology and diagnosis, pathology and treatment. The mechanism of bronchial obstruction by foreign body and the importance of its manifestation by physical signs and roentgen examination in diagnosis of foreign body as well as in diagnosis of disease of other than foreign body origin are demonstrated. Actual specimens of foreign bodies are displayed and interesting facts regarding the case histories of typical cases are given, including explanation of the mechanical problems presented and the methods of their solution.

Section on Pediatrics

The representative to the Scientific Exhibit from the Section on Pediatrics is Albert V. Stoesser, Minneapolis.

WILLIS J. POTTS, STANLEY GIBSON and SIDNEY SMITH, Children's Memorial Hospital and Northwestern University Medical School, Chicago:

Aortic Pulmonary Anastomosis for Pulmonary Stenosis: The exhibit shows (1) the diagnosis of pulmonary stenosis (tetralogy of Fallot) illustrated by roentgenograms, electrocardiograms and brief histories of typical cases; (2) the experimental work on approximately 30 dogs: development of the operation, drawings, specimens and demonstration of the clamps; (3) results in patients operated on: technic, mortality and outcome.

MILTON I. LEVINE and HELENE ELIASBERG, Cornell University Medical College, New York:

The Chest in Infants and Children: Chest roentgenograms illustrate pathologic changes in the mediastinum and lungs of infants and children. A brief description accompanies each plate, directing attention to salient features.

ALFRED D. BIGGS, Northwestern University Medical School and St. Luke's Hospital, Chicago:

Primary Tuberculosis—A Correlation of the Clincal and Roentgen Ray Findings in 115 Cases: The Vollmer patch agrees with purified protein derivative tests in 97 per cent of the entire series, the Vollmer patch being a little less sensitive. Primary tuberculosis is a subclinical disease and can be detected only by a tuberculin test. Its course is best followed by serial roentgenograms. These groups are to be enlarged and followed through adolescence and beyond. If allergy is the dominant factor, the morbidity and mortality rate will be higher in the positive reactors. If immunity is the dominant factor, the morbidity and mortality rate will be lower in the positive group.

A. L. VAN HORN, U. S. Children's Bureau, Washington, D. C.:

Rheumatic Fever: The exhibit describes the grant-in-aid program for children with rheumatic fever and a study of mortality from rheumatic fever.

HAROLD W. DARGEON, Memorial Hospital Center for Cancer and Allied Diseases, New York:

Tumors of Childhood: Common varieties of tumors, benign and malignant, occurring in children, birth to 15 years, are illustrated. Statistical charts show position which neoplasms occupy in mortality during childhood.

CHARLES F. MCKHANN and SAMUEL SPECTOR, Babies and Children's Hospital, Cleveland:

The Malnourished Child: The exhibit depicts the incidence, causation and the approach to and alleviation of chronic malnutrition in children. The major cause for chronic malnutrition as observed in this clinic has proved to be not dietary insufficiency but disease in the child.

DONALD B. ARMSTRONG and GEORGE M. WHEATLEY, Metropolitan Life Insurance Company, New York:

The School Child, Health Progress and Needs: Charts describe the conquest of childhood diseases; evidences of improvement in physical status of school children; current problems of child health as revealed by mortality and morbidity are demonstrated by statistics and photographs; the principles of case finding, prevention and care are stated.

JOHN P. HUBBARD, American Academy of Pediatrics Study of Child Health Services, Washington, D. C.:

Study of Child Health Services: The organization, development, conduct and purpose of a nationwide study of child health services being currently conducted by the American Academy of Pediatrics is shown.

Section on Experimental Medicine and Therapeutics

The representative to the Scientific Exhibit from the Section on Experimental Medicine and Therapeutics is Robert W. Wilkins, Boston.

F. F. TISDALL, Committee on Nutrition, Canadian Medical Association, Toronto, cooperating with the Council on Foods and Nutrition, American Medical Association, Chicago:

Physical Signs of Nutritional Failure: A group of colored illustrations show physical manifestations of nutritional failure.

RITA S. FINKLER, GEORGE M. COHN and N. JAMES FURST, Newark Beth Israel Hospital, Newark, N. J.:

Osteopathies Encountered in the Endocrine Clinic: The group consists of thyropituitary dysfunction, Turner's syndrome, Lorain-Levy dwarfism, hypogenitalism with polyostotic fibrous dysplasia, pseudo Froehlich's syndrome with osteogenesis imperfecta, pituitary adenoma with acromegalic manifestations and macrosomia genitalis with accelerated bony maturation. Presentation consists of before and after photographs of the patient, x-ray prints at various stages of period of observation, laboratory findings, synopsis of clinical and laboratory findings and

discussion. The group of cases presented have been seen in the Endocrine Clinic of the Newark Beth Israel Hospital. These cases have been referred by various sources and have demonstrated a common denominator of osseous pathologic change. In some cases the etiology could be definitely assumed to be endocrine dysfunction; in others no definite endocrine etiology could be demonstrated even though these cases were referred under the assumption that some obscure endocrinopathy was present.

JANET G. TRAVELL, SEYMOUR H. RINZLER, AUDRIE L. BOBB, NOLTON H. BIGELOW and LAWRENCE W. HANLON, Cornell University Medical College, New York:

Somatic Pain Syndromes: Clinical data obtained in several hundred subjects with pain due to various disorders of the myofascial structures is presented. Many of the commonly occurring referred pain patterns, which are shown to be relatively constant from individual to individual, are mapped for different regions of the body. The role of the somatic component in visceral pain reference, as observed in patients with acute myocardial infarction, is demonstrated. The basis for the therapeutic effects of local block of somatic trigger areas by means of ethyl chloride spray, dry needling and infiltration with procaine hydrochloride or isotonic solution of sodium chloride is analyzed.

GEORGE R. MENEELY, ROBERT FURMAN and ROBERT GALE, Vanderbilt University School of Medicine, Nashville, Tenn.:

Experimental Myocardial Infarction—The Capillary Factor: Following brief temporary ischemia of the left ventricle, classic electrocardiographic changes indicative of myocardial infarction may develop despite reestablishment of circulation. Temporary ischemia may result in local permeability to colliodal dyes or radioactive isotopes. Conversely, general asphyxia results in diffuse myocardial capillary permeability at times and at other times results in local capillary injury causing an infarct. Graded histologic changes ranging from mere edema to permeability of the capillaries to red cells occurs, depending on the duration of local ischemia. It is concluded that temporary ischemia or asphyxia can injure myocardial capillaries and set the stage for infarct even if the artery reopens.

CHARLES F. GESCHICKTER, Georgetown University Medical School, Washington, D. C.:

Oil Soluble Metals in the Treatment of Leukemia: Charts show the clinical history and hematologic response of leukemia patients to oil soluble copper and nickel compounds. Photomicrographs of blood smears, bone marrow and so on in color are included.

BENEDICT E. ABREU, HENRY W. ELLIOTT, GRANT W. LIDDLE and CARROLL A. HANDLEY, University of California Medical School, San Francisco:

Drugs Affecting Cerebral Circulation and Metabolism: Changes produced on cerebral circulation and in vivo and in vitro cerebral metabolism by central nervous system depressants and by agents effective in the therapy of migraine are demonstrated. Analysis of effects on metabolic processes transpiring in the nervous system as indicated by in vitro metabolism studies (Warburg technic) are shown, together with correlation of changes produced in vitro with those observed in the intact mammalian central nervous system.

JOSEPH M. HILL, SOL HABERMAN and E. E. MUIRHEAD, Baylor Hospital and Southwestern Medical College, Dallas, Texas:

CDE (Rh-Hr) Blood Antigens and Antibodies: New information in respect to the CDE (Rh-Hr) blood antigens, together with original work on the corresponding antibodies, is presented. Clinical applications and the need for routine Rh typing are shown and practical simplified typing technics are demonstrated.

ROBERT A. WOODBURY, GEORGE P. CHILD, FRANK JONES, CHARLES W. HOCK, GEORGE MCINNES and RICHARD TORPIN, University of Georgia School of Medicine, Augusta, Ga.:

Treatment of Pylorospasm and Peptic Ulcer with Asymatrine Hydrobromide: Asymatrine hydrobromide, diethylaminoethyl phenylthionylacetate hydrobromide, has a pronounced effect in reducing pylorospasm and gastric hypermotility, thereby causing a return to normal activity. It has no direct influence on gastric hyperacidity though it sometimes reduces it, apparently by improving pyloric activity. It has proved to be very effective in the treatment of peptic ulcer, pylorospasm, nervous indigestion and some headaches initiated with gastric distress. When hyperacidity is present, this should be controlled with antacids. Asymatrine has not produced mydriasis cycloplegia or cutaneous flush in any patient even though doses far above the therapeutic level have been administered. Slight nervousness was observed in only 1 of the 400 patients who received therapeutic doses. This was transient in nature and disappeared even though therapy was continued.

KURT LANGE, DAVID WEINER and LINN J. BOYD, New York Medical College, New York:

Nephrosis. New Concepts of Functional Pathology and Therapy of the Nephrotic Stage: The nephrotic stage of chronic glomerular nephritis is a generalized disease of the small vessels with a tremendous increase in capillary permeability. The edema formation is due to this fact and not primarily to the lowered colloid osmotic pressure. A new simple method for rapidly and accurately determining the colloid osmotic pressure of plasma indicates that edema appears and disappears independently of the colloid osmotic pressure but is paralleled by the changing capillary permeability as measured by the fluorescein method. The same can be noticed in edema due to starvation and in myxedema. Some common errors in the treatment of the nephrotic syndrome as, for example, the use of plasma transfusion, will be explained. With a reduced glomerular filtration area the increased permeability of the glomerular capillaries is essential to prevent retention of metabolites. This is illustrated by the fact that tightening of the capillaries by calcium leads to a reversible azotemia. The one hour excretion of fluorescein is a good test of glomerular function, as demonstrated by the parallelism between inulin clearance and fluorescein excretion tests.

NORMAN JOLLIFFE, the Nutrition Clinic, Department of Health of the City of New York and the Department of Preventive Medicine, New York University College of Medicine, New York:

Signs of Nutritional Deficiency Disease: The exhibit illustrates (1) skin lesions associated with vitamin A deficiency; (2) hemorrhagic manifestations of vitamin C and K deficiency; (3) dyssebacia associated with riboflavin deficiency; (4) skin lesions of pellagra; (5) conjunctival lesions sometimes attributed to deficiency of vitamin A and riboflavin; (6) eye lesions sometimes attributed to nutritional deficiency; (7) lip lesions associated with nutritional deficiencies; (8) tongue lesions manifested chiefly by color changes; (9) stages of chronic glossitis; (10) stages of chronic gingivitis.

EARL R. LOEW and KLAUS R. UNNA, University of Illinois College of Medicine, Chicago:

Pharmacology of Antihistamine Drugs: The chemical nature, toxicity, side-actions and pharmacologic actions of the antihistamine drugs neoantergan, benadryl and pyribenzamine are shown. These drugs prevent or diminish the prominent effects of histamine such as bronchoconstriction, intestinal and uterine spasm, vasodilatation and wheal and edema formation, but not secretagogue effects of histamine on gastric glands. Laboratory findings are compared or contrasted with information concerning clinical effectiveness. The evidence supporting the contention that histamine is a major cause of anaphylactic manifestations will be summarized.

ALVAN L. BARACH, BETTINA GARTHWAITE and HYLAN A. BICKERMAN, Presbyterian Hospital and College of Physicians and Surgeons, Columbia University, New York:

Penicillin Treatment of Bronchopulmonary Disease: The clinical results of penicillin aerosol therapy will be presented in the following clinical entities: bronchiectasis, lung abscess, sinusitis, bronchial asthma and chronic bronchitis. Laboratory

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data will include concentration of penicillin in the blood and sputum as well as the effect of treatment on predominating organisms. The effectiveness of various technics of aerosol therapy will be presented.

WILLIAM H. FELDMAN and H. CORWIN HINSHAW, Mayo Clinic, Rochester, Minn., and KARL PFUETZE, Mineral Springs Sanatorium, Cannon Falls, Minn.:

Streptomycin, Experimental and Clinical Observations: Charts, photographs, photomicrographs and roentgenograms demonstrate (*a*) the effect of streptomycin in experimental tuberculosis in guinea pigs and (*b*) the effect of the drug on various types of clinical tuberculosis.

GEORGE T. HARRELL, Bowman Gray School of Medicine, Winston-Salem, N. C.:

Reaction in Human Beings to Lipid Fractions of Human Tubercle Bacilli: The chemical derivation of the fractions from the whole bacillus is shown, with descriptions of the three fractions phosphatide acetone soluble fat and wax used in these experiments. The cellular reaction in the biopsies of human beings is presented, as well as descriptions of the cellular reaction in guinea pigs. Photographs of the legs of patients at different intervals showing the reactions produced illustrate tuberculosis (incipient, moderately advanced and far advanced), sarcoid and normal or psychotic individuals for comparison. Photomicrographs of the reactions and kodachrome slides show the reactions in these groups at various stages. The highly reactive character of phosphatide, the nonspecific and variable reactions to acetone soluble fat, a constant nonspecific ulceration to the wax are shown. Sarcoid is not an altered reaction to a lipid fraction of the tubercle bacilli.

HENRY TURKEL, Detroit; J. JOE QUILLIGAN and JAMES T. MASON, University Hospital, University of Michigan, Ann Arbor:

Tissue Biopsies and Bone Marrow Infusions: Demonstrations of the trephine method of biopsies of bone marrow, liver, prostate and bone marrow infusions are presented.

Section on Pathology and Physiology

The representative to the Scientific Exhibit from the Section on Pathology and Physiology is Frank W. Konzelmann, Atlantic City, N. J.

BENJAMIN T. TERRY, Tacoma, Wash.:

Razor Section Technic and the Polychroming of Methylene Blue: Razor section technic has been thoroughly tested in private and in hospital practice. In tissue pathology it has proved to be dependable and very helpful. Usually in sixty seconds or less a section of tissue can be cut, stained and mounted ready for immediate diagnosis microscopically. The technic is applicable to most fresh unfixed tissues and to tissues recently thoroughly fixed in solution of formaldehyde. The instruments used are inexpensive, and the technic is so simple that any one can learn it easily and quickly. To those interested, opportunity will be given to practice it under supervision. A new and simple way to prepare and neutralize polychrome methylene blue will also be demonstrated.

CARROLL L. BIRCH and LOUIS R. LIMARZI, University of Illinois College of Medicine, Chicago:

Bone Marrow: Evaluation of various methods of bone marrow study are illustrated by transparencies accompanied with enlargements in natural color of bone marrow pictures in various blood dyscrasias. A series of five illustrations depict the development of bone marrow.

MAX M. STRUMIA and J. IVAN HERSHEY, Bryn Mawr Hospital, Bryn Mawr, Pa.:

Embedding of Tissues in Transparent Plastic: A method for the embedding of human tissues in a transparent plastic is presented. The method consists in freezing of the fresh specimens, dehydration of these specimens by sublimation of water in vacuo by means of low temperature condensation while the specimens are kept in the frozen state, impregnation of the dehydrated specimen with the monomer methyl methacrylate, polymerization of the monomer to a solid "Plexiglas" cutting and polishing. This means allows the preservation of portions of human organs or whole organs without distortion and with good color preservation. This method is applicable to many biologic specimens, insects and plants. The exhibit includes a large number of specimens of human tissues thus embedded as well as a few biologic specimens.

HAROLD S. TUFT, RICHARD E. ROSENFIELD, DAVID R. WEILL JR. and K. Y. YARDUMIAN, Montefiore Hospital, Pittsburgh:

Thromboembolic Disease: Photographs and a mannequin demonstrate the etiology, pathogenesis and pathologic physiology of the intravascular clotting phenomenon. Diagnosis as aided by the heparin tolerance principle and treatment based on the estimation of prothrombin activity under dicumarol therapy are also presented.

JANE S. ROSS, CORNELIUS T. KAYLOR and WILLIAM G. TURMAN, Syracuse University College of Medicine, Syracuse, N. Y.:

Distribution of Nerves and of the "Conducting" System in the Human Heart—Suggestions Regarding Function: Photomicrographs, paintings and reconstructions in plastic and in wax indicate the course and distribution of the conducting system and of the ventricular nerves. Complete serial sections of several human fetal hearts were taken (*a*) from a 16 weeks fetus stained by the Mallory technic, (*b*) from a 5½ months fetus stained with Masson's technic and (*c*) two other series obtained at approximately the fifth month and stained by the Cajal silver nitrate method for nerve structures.

MILTON G. BOHROD and JOHN J. BEITER, Rochester General Hospital, Rochester, N. Y.:

Medical Photography in a General Hospital: The exhibit shows the work of a photographic department in a medium sized general hospital. Use of photography for record and education in clinical medicine, in pathology, in the demonstration of methods and in hospital public relations is presented, together with examples of complete photographic case studies, comparison of the old pathology museum with a photographic library, advantages of use of photographs over demonstration of actual patients in conferences and demonstration of simple equipment as aids in producing good pictures.

JACOB FURTH, Cornell University Medical College, New York:

Induction and Characteristics of Ovarian Neoplasms with Hormonal Changes and Hypervolemia: A chart shows relation of time and dose to induction of ovarian neoplasms by roentgen rays and other methods. Illustrations and charts show the different types of induced and transplanted tumors (granulosa cell, luteomas, tubular adenomas and chorionepitheliomas) and the secondary changes (feminizing and virilizing) they produce. The pathology and pathogenesis of hypervolemia (increased blood volume) secondary to transplanted granulosa cell tumors are shown, together with methods of measuring blood.

LAURANCE W. KINSELL, HARRY WEISS, GEORGE MICHAELS, EARL EVANS, HARRY BARTON and JOHN SHAVER, United States Naval Hospital, Oakland and University of California Medical School, San Francisco:

The Pathologic Physiology of Liver: The exhibit correlates abnormalities in liver function, as determined chemically, with abnormalities in liver structure, as obtained in serial liver biopsies in patients with cirrhosis of the liver. Current concepts of pathogenesis and treatment are presented diagrammatically.

HANS POPPER, FREDERICK STEIGMANN, KARL A. MEYER, DONALD D. KOZOLL and MURRAY FRANKLIN, the Hektoen Institute for Medical Research of the Cook County Hospital, Chicago:

Clinical Application of Liver Function and Liver Structure: Based on clinical observation, laboratory study and histopathologic examination of needle or surgical biopsy and necropsy specimens of a large series of patients with liver diseases, a correlation between structural and functional changes of the

liver is demonstrated. This correlation leads to a better evaluation of the functional and morphologic methods used in the clinical diagnosis of liver diseases and of the rationale and indications of their therapy. Furthermore, a classification of acute hepatitis into infectious (viral), toxic, biliary (obstructive) and purulent forms is presented and an attempt of a similar division of chronic hepatitis (cirrhosis) is illustrated. The exhibit shows the extent to which modern laboratory procedures, including liver biopsies, can be used in the clinical management of hepatic diseases.

TIMOTHY LEARY, Mallory Institute of Pathology, Boston:

Irritant Crystalline Ester Cholesterol and Atherosclerosis: The exhibit illustrates the characteristics of crystalline ester cholesterol in health and disease; presents evidence that this substance will produce in the experimental rabbit lesions (cirrhosis of liver, enlargement of spleen, chronic nephritis) corresponding to those accepted by Gye and Purdy as characteristic of chronic silica poisoning; demonstrates that crystalline ester cholesterol is present in all active atherosclerotic lesions.

DAVID B. TYLER, California Institute of Technology, Pasadena, Calif. (present address Army Chemical Center, Medical Division, Edgewood Arsenal, Md.):

Effects of Prolonged Wakefulness on Man: The physiologic, biochemical and psychologic findings in prolonged wakefulness are presented. Data were obtained from twenty experiments involving 600 subjects who submitted to voluntary insomnia for periods up to one hundred and twelve hours. Special emphasis is placed on the electroencephalographic changes.

CHARLES P. LARSON and MURRAY L. JOHNSON, Tacoma General Hospital, Tacoma:

Surgical Diseases of the Ovary: Specimens demonstrate all the various pathologic lesions of the ovary as well as the normal physiologic changes occurring in the ovary which are often misinterpreted at surgery as being pathologic lesions calling for oophorectomy. Charts show the analysis of the pathologic study of all oophorectomies over a five year period from nine different hospitals, including one county hospital. The various lesions encountered are classified according to frequency and percentage. The total percentage of ovaries removed in which no pathologic lesion was observed is computed for each hospital, with comments. The exhibit stresses the various physiologic changes which are often misdiagnosed by surgeons as pathologic changes. Microscopic slides of the various pathologic lesions are available for study.

S. E. GOULD, Wayne County General Hospital and Infirmary, Eloise, Mich.:

Trichinosis, A Major Health Problem: The method of spread of the disease, signs and symptoms, diagnostic methods, treatment and method of control are shown. Diagnostic tests and apparatus used in diagnostic methods are shown and living worms prepared from infected pork are demonstrated.

LALL G. MONTGOMERY, Registry of Medical Technologists of the American Society of Clinical Pathologist, Muncie, Ind.:

Registry of Medical Technologists, American Society of Clinical Pathologists: The history, aims, requirements and development of the Registry of Medical Technologists are presented, and the part the registry has taken in the general development of medical technology is shown, together with a map showing distribution of registered medical technologists. A booklet of information and a list of schools of medical technology approved by the Council on Medical Education and Hospitals of the American Medical Association will be distributed.

OTTO F. KAMPMEIER and THOMAS N. HAVILAND, University of Illinois College of Medicine, Chicago:

Anatomic Specimens Preserved in Plastics: The exhibit includes cleared specimens, injected specimens, corrosion specimens, fragile wax models, dried preparations, transections of fetuses and adults, whole mounts of embryos, colored preparations, small dissections and brain sections mounted in plastics. The essential aim of the exhibit is to demonstrate the usefulness of plastics in the preservation of human material for study.

Section on Nervous and Mental Diseases

The representative to the Scientific Exhibit from the Section on Nervous and Mental Diseases is A. B. Baker, Minneapolis.

WALTER L. BRUETSCH and MAX A. BAHR, Central State Hospital and Indiana University School of Medicine, Indianapolis:

Optic Nerve Atrophies: Sections and photomicrographs of various stages of atrophy of the optic nerves as they occur in cases of brain tumor, Schilder's disease, Pick's disease, multiple sclerosis, hydrocephalus, syphilis of the nervous system and optic atrophy caused by tryparsamide are presented. Therapeutic considerations, which vary with the etiology, are shown.

HENRY R. VIETS, Massachusetts General Hospital, Boston:

A Pictorial History of Myasthenia Gravis: Charts and photographs show the history of the knowledge of myasthenia gravis from the first description in the seventeenth century to the present time, with particular emphasis on the advances made in the last twelve years since the advent of neostigmine therapy.

WALLACE B. HAMBY, Buffalo General Hospital, Buffalo.

Subarachnoid Hemorrhage of Aneurysmal Origin. Review of 130 Cases: A series of 130 cases is shown, with sufficient basic material to make the information attractive to those not previously informed on the topic. Data of chief interest concern the outcome of these cases.

MARY E. O'SULLIVAN, Bellevue Hospital, New York:

Migraine Is Curable: The result of a twelve year study includes (*a*) a therapeutic survey with the method and the results of twenty-five different drugs in the treatment of 932 migraine patients; (*b*) a symptom survey in relation to type of medication which cures migraine; (*c*) photomicrographs of the capillaries during the migraine and nonmigrainous periods.

RANDOLPH LEIGH JR. and HUGH PAIGE NEWHILL, University of Virginia College of Medicine, Charlottesville:

Epilepsy in Virginia: Incidence and distribution of epilepsy in Virginia is shown. Patients treated in an eighteen month period through the Anti-Convulsive Clinic of the Department of Neurology and Psychiatry of the University of Virginia Hospital with referring agencies. Examples of electroencephalograms of main types of epilepsy treated are included.

H. S. RUBINSTEIN, Sinai Hospital, Alfred Ullman Laboratory for Neuro-Psychiatric Research, Baltimore, and C. L. DAVIS, University of Maryland School of Medicine, Baltimore:

Stereoscopic Atlas of Neuroanatomy: Stereoscopic photographic plates depict the embryology, gross structure and internal structure of the human brain dissected by an original method to disclose functional fiber systems. These plates are observed by means of the stereoscope, thus allowing a three dimensional picture of sequential stages of dissection. Each plate is accompanied with a labeled drawing which serves as an aid in orientation.

RUDOLPH JAEGER and WILLIAM WHITELEY JR., Jefferson Medical College and Hospital, Philadelphia:

Specimen of First Successfully Removed Brain Tumor: Specimen of a brain tumor (meningioma) removed by W. W. Keene in 1888 at Jefferson Hospital is exhibited. The tumor removed at operation, with the brain of the patient, obtained at necropsy thirty years later, which shows the defect created by removal of the growth, is demonstrated. This is of historical value as the first intracranial tumor to be successfully removed in the entire world.

ERNEST A. SPIEGEL, MONA SPIEGEL-ADOLF, HENRY T. WYCIS and MORTON MARKS, Temple University Medical School, Philadelphia:

Cerebral Concussion: It has been attempted on clinical as well as experimental material to elucidate the mechanism of cerebral concussion by various physical and physicochemical measurements, such as studies of the impedance of the brain, determination of the convulsive reactivity, electroencephalography, spectrophotometry of the cerebrospinal fluid in ultraviolet light and enzyme studies. Histopathologic and electroencephalographic changes in subcortical areas and injuries to the cell surfaces in the central nervous system as well as to intracellular structures will be demonstrated (appearance of nucleic acid compounds and related enzymes in the cerebrospinal fluid).

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Section on Dermatology and Syphilology

The representative to the Scientific Exhibit from the Section on Dermatology and Syphilology is Francis W. Lynch, St. Paul.

J. K. HOWLES and WILLIAM BRANKS STEWART, Louisiana State University School of Medicine, New Orleans:

Cutaneous Granulomas: The exhibit contains moulages, colored drawings, paintings, colored histopathologic photographs as well as descriptive charts of the cutaneous granulomas. Some of the rare granulomas are shown as well as the common varieties. An effort is made to facilitate differentiation of these granulomas.

STEPHEN ROTHMAN and ADELAIDE M. SMILJANIC, University of Chicago Clinics, Chicago, and ALFRED W. WEITKAMP, Standard Oil Company, Indiana:

Spontaneous Cure of Ringworm of the Scalp in Puberty: Changes are demonstrated in the composition of sebaceous gland secretion which occur in puberty and which are responsible for the spontaneous cure in puberty of ringworm of the scalp and for the immunity of adults. The fungicidal action of adult hair fat is shown with explanatory remarks on the technic of the fungicidal testing together with the tracing of the fungicidal activity by fractionation of the hair fat. It is concluded that the fungicidal activity is dependent on the presence in the sebum of highly fungicidal free fatty acids, the concentration of which is more than six times higher on adults' than on children's scalps.

G. H. FAGET, P. T. ERICKSON and SISTER HILARY ROSS, U. S. Marine Hospital, Carville, La.:

Chemotherapy of Leprosy: Photographs of patients before and after treatment with sulfone drugs, promin, diasone and promizole are shown. The exhibit clearly demonstrates the suppressive action of the sulfones even in far advanced lepromatous disease of the worst prognosis. Less advanced cases become arrested more rapidly. All the lesions of leprosy respond more or less slowly to the therapeutic action of the sulfones. Improvement is progressive without relapses, so that the sulfones appear to be chemotherapeutic agents for leprosy. Histopathologic changes produced by the sulfones are also shown. The encouraging effects of streptomycin (used for a relatively short time) on leprous lesions are also demonstrated.

LEON GOLDMAN, Department of Dermatology and Syphilology, and WALDO YOUNKER, Kettering Laboratory of Applied Physiology, University of Cincinnati College of Medicine, Cincinnati:

Clinical Microscopy of the Surface of the Skin: Anatomy, physiology and biophysics in relationship to cutaneous optics are reviewed. Various types of apparatus for examination of the skin are shown, from simple magnifiers to new developments of skin microscopes. Types of illumination necessary for different technics of examination of the skin surface and skin capillaries are depicted. These technics include also fluorescent and infra-red microscopy. Brief mention is made of contrast phase microscopy in relationship to dermatology. Photomicrographs illustrating studies of various cutaneous conditions are exhibited, and an outline is given of some disorders in which cutaneous microscopy has been of value.

WILBERT SACHS and PERRY M. SACHS, Skin and Cancer Hospital, New York:

Cutaneous Malignant Growths: Clinical and microscopic pictures of the different types of malignant growths of the skin are shown, together with series of microscopic photographs of anoplastic epithelioma.

JOHN G. DOWNING and BERNARD APPEL, Tufts College Medical School, Boston:

Dermatoses Due to Leather: A graphic survey of the historical evolution of the process of manufacturing leather, illustrating the hazards that produce industrial dermatoses, with examples of actual cases, is exhibited.

EDWARD D. DELAMATER, Mayo Clinic, Rochester, Minn.:

Dermatomycoses: Clinical Types and Variations in Their Causative Fungi: A pictorial demonstration of the clinical types of dermatomycosis caused by two distinct fungi, Microsporum canis and Trichophyton (Gypseum) mentagrophytes is shown. The variations and mutations of these fungi which occur spontaneously or can be induced by various means are demonstrated graphically in color. Moulages of certain of the more striking and unusual clinical types of disease are also included. The exhibit presents the types of variation, both clinical and mycologic, which have caused confusion in the field.

J. B. HOWELL, BEDFORD SHELMIRE and GILMORE BRAU, Southwestern Medical College, Dallas, Texas:

Use of Interstitial Radium Needle Therapy for Cancer of the Skin: Photographs and charts depict the indications and usefulness of radium needles in the treatment of cancer of the skin in certain localities, especially areas offering obstacles to treatment by surgery or roentgen rays. Drawings demonstrate the needles used, the technic of implantation, the arrangement of the needles in particular patterns for adaptation to certain sites and the method of calculating the dose the lesions receive.

PAUL E. BECHET, Elizabeth, N. J.:

Synopsis of the More Important Achievements of American Dermatology: Charts present biographic data and the more important contributions to medical literature of twenty-five leading American dermatologists, with complete bibliography and photographs. Original autographed letters and other memorabilia are also presented. An illustrated pamphlet of twenty-seven pages containing all the data in the exhibit will be distributed to visitors on request, as well as detailed biographies of many of the men mentioned.

Section on Preventive and Industrial Medicine and Public Health

The representative to the Scientific Exhibit from the Section on Preventive and Industrial Medicine and Public Health is Paul A. Davis, Akron, Ohio.

BRUNO GEBHARD, Cleveland Health Museum, Cleveland:

One Hundred Years of Lay Health Education: The role of the medical profession in lay health education during the last hundred years is presented. Samples are taken mainly from the Western Reserve, particularly Cleveland. Pamphlets, posters, journals, books and photographs are arranged chronologically, including material from the first decade of the Cleveland Health Museum.

CARL F. JORDAN and I. H. BORTS, Iowa State Department of Health, Des Moines and Iowa City:

Brucellosis: The reported occurrence of brucellosis in the forty-eight states from 1930 to 1946 is presented. Attention is directed to the three causative brucella organisms, with special emphasis on the caprine strain (Brucella melitensis) recently recognized as being endemic in Iowa and other Midwestern states. Means of conveyance, population groups concerned and survey findings are portrayed. Clinical and laboratory findings, therapeutic methods and chronic brucellosis received careful consideration. Literature will be available for distribution.

CLEVELAND J. WHITE, Loyola University School of Medicine, Chicago:

Diseases of the Nails: Charts, posters, drawings and moulages of various nail syndromes are shown. Especial reference is made to dermatologic syndromes, with emphasis on those occurring in the various occupations.

CHARLES WALTER CLARKE and JOHN W. FERREE, American Social Hygiene Association, New York:

Prevention of Venereal Diseases: A rounded concept of prevention of syphilis and gonorrhea including medical, social and educational aspects is presented. The exhibit points out that the "find 'em and treat 'em" plan is not enough and emphasizes the need to deal with sexual promiscuity, which is the usual method of spread of infection. The places of chemical, mechanical and oral prophylaxis, therapeutic disinfection and congenital syphilis by antepartum treatment of the mother are shown. An actual epidemiologic investigation is presented, with an indication of what might have been done at various points to prevent the transmission of syphilis or gonorrhea.

ELMER H. LOUGHLIN, SAMUEL H. SPITZ and RICHARD H. BENNETT, Long Island College Hospital, Brooklyn:

Cosmopolitan Intestinal Parasitism: The epidemiology, pathogenesis and diagnosis of the common helminthic and protozoal infections encountered in the United States is presented. Transparencies portray these features in the epidemiology, pathogenesis and development of the parasites from ova to mature worms in the case of helminths and cystic or trophozoite phases of pathogenic protozoa.

J. LYNN MAHAFFEY, New Jersey State Department of Health, Trenton, N. J.:

The Health Department and the Physician—A Working Partnership: Illustration of some of the many phases of New Jersey's public health program in which the health departments and the practicing physicians work together for a common end—improved health for the state.

J. S. FELTON, Health Department, Monsanto Chemical Company, Clinton Laboratories, Knoxville, Tenn.:

Health Education in Industry: Specific objects employed in health education in industry and methods of integrating such objects in changing the health behavior of the atomic worker.

A. H. WHITTAKER, Wayne University School of Occupational Health, Detroit:

The Historical Background of Occupational Diseases: The exhibit presents the early knowledge of occupational health by means of the earliest writings on the subject, the earliest printed editions and many rare volumes. The presentation is supplemented by portraits of Ramazzini, Agricola, Diemberbroeck and others, and by books and pamphlets including Statius (1485 edition), Aristotle (Aldine edition 1495), Hippocrates, Plinius Secundus, the Bible, Lucretius, Agricola, Diemberbroeck, Paracelsus: the first complete contribution, Ellenbog: the first pamphlet, Ramazzini: the first complete study, numerous editions, writers of the Renaissance, novelists dealing with social conditions such as Dickens and Zola, the American colonies, writers of the late nineteenth century, writers of the early twentieth century, Sir Humphry Davy and Mines, English and German and French writers from 1860, the period introduced by Alice Hamilton, Kober and Hayhurst, publications of the United States Public Health Service dealing with occupational health, modern publications dealing with occupational health.

R. R. SAYERS, Bureau of Mines, Washington, D. C., and H. H. SCHRENK, Bureau of Mines, Pittsburgh:

Modern Welfare Facilities in Mining Communities: Photographs of modern welfare facilities such as houses, schools, club houses, playgrounds, change houses and hospitals in various metal and coal mining communities are shown.

J. G. TOWNSEND, Industrial Hygiene Division, United States Public Health Service, Washington, D. C.:

Progress in Industrial Hygiene: Progress is shown in the two major activities of the Industrial Hygiene Division, U. S. Public Health Service, investigations of hazardous industries leeading to the control of occupational diseases, and growth of industrial hygiene practice through the establishment of industrial hygiene units in states and localities.

H. L. MANTZ and M. L. FURCULOW, U. S. Public Health Service, Kansas City, Mo., and E. J. GILLESPIE, IRA LEWIS and L. B. EDWARDS, U. S. Public Health Service, Bethesda, Md.:

Pulmonary Lesions Associated with Sensitivity to Histoplasmin: A demonstration of chest radiographic findings correlated with the histoplasmin skin test. In the last few years the correlation between calcification in the chest and histoplasmin sensitivity has been established. Films demonstrating parenchymal infiltrates which in many cases progress to calcification and which are associated with coincident conversion in histoplasmin sensitivity are shown.

F. J. WEBER and H. F. A. LONG, Tuberculosis Control Division, U. S. Public Health Service, Washington, D. C.:

Control of Tuberculosis: The exhibit shows certain aspects of diagnosis, prognosis and treatment of tuberculosis.

J. R. HELLER JR., EUGENE A. GILLIS, MAX R. KIESSELBACH and C. JUDSON HARDY, Venereal Disease Division, U. S. Public Health Service, Washington, D. C.:

Aids to the Private Physician in the Management of Venereal Disease: The exhibit shows the newer treatment methods for syphilis and gonorrhea. Reprints and pamphlets of interest to physicians will be available.

C. W. EMMONS, JOSEPH A. BELL and BYRON J. OLSON, National Institute of Health, U. S. Public Health Service, Bethesda, Md.:

Histoplasmosis: The exhibit shows the fungus Histoplasma capsulatum and the pathology in man and animals, methods of diagnosis and natural history of the disease it causes.

ROY HERTZ, National Cancer Institute, U. S. Public Health Service, Bethesda, Md.:

Hormonal Control of Tissue Growth; Normal and Abnormal: A graphic presentation of the tissue growth effects induced by administration of gonadal and pituitary hormones; the reciprocal antagonism between various steroid hormones in relation to tissue growth; vitamin-hormone interrelationships; the application of these phenomena to hormonal therapy of cancer of the prostate.

R. J. HUEBNER, W. L. JELLISON and MORRIS GREENBERG, National Institute of Health, U. S. Public Health Service, Bethesda, Md., and the City of New York Department of Health, New York:

Rickettsialpox: The exhibit shows clinical characteristics, etiology and epidemiologic factors such as the vector and the reservoir and some of the environmental conditions responsible for the spread of the disease.

Section on Urology

The representative to the Scientific Exhibit from the Section on Urology is John H. Morrissey, New York.

ROGER W. BARNES, R. THEODORE BERGMAN and D. S. RAUSTEN, College of Medical Evangelists, School of Medicine, Los Angeles:

Undergraduate Urologic Instruction: Specimens, photomicrographs, moulages and other material used in the instruction of medical students in urologic diagnosis are shown. The moulages consist of normal and pathologic conditions of the prostate, as felt by rectal palpation. Photomicrograph and specimens accompany these models.

ROBERT H. HERBST and JAMES W. MERRICKS, Presbyterian Hospital and University of Illinois College of Medicine, Chicago:

Transurethral Drainage of Seminal Vesicles: The exhibit shows cleared postmortem specimens illustrating relations of seminal vesicles to prostate, bladder and ureters from normal and diseased persons; photographs of seminal vesiculograms of the normal and pathologic changes in these organs; charts and drawings including some brief case histories depicting the management of 350 patients with end results up to ten years, many of which were originally classified as chronic prostatitis.

C. M. SIMPSON, E. O. BRADFIELD and J. R. KILMAN, Scott and White Hospital, Temple, Texas:

Plastic Surgery for Hydronephrosis: Moulages, roentgenograms and specimens show the various types of pathologic conditions producing hydronephrosis and various methods of their correction by surgical means.

ERNEST M. WATSON, HANS R. SAUER and EUGENE M. BURKE, Roswell Park Memorial Institute and University of Buffalo School of Medicine, Buffalo:

Tumors of the Testicle: A review of over 200 testicular tumors observed over a twenty-five year period is presented. The tumors have been classified according to the criteria adopted by the Army Institute of Pathology. An attempt is made to correlate the histologic findings with the prognosis and the response to irradiation. The signs, symptoms, diagnosis and clinical course of the disease is here discussed, together with the end results obtained.

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GEORGE F. CAHILL and MEYER M. MELICOW, Squier Urological Clinic, Presbyterian Hospital, New York:

Tumors of the Adrenal Gland: This exhibit deals with tumors of the adrenal gland. From correlated clinical and pathologic studies, these tumors are classified. Four main groups of cortical tumors are discussed: (1) asymptomatic, (2) adrenogenital, (3) Cushing syndrome, (4) mixed adrenogenital and Cushing. The medullary tumors are discussed and illustrated. Studies on phenochromocytomas are shown and illustrate (1) the specificity of eyeground change, (2) the specificity of the antiepinephrine action of benzodioxane compounds and (3) the use of histamine as an epinephrine stimulant. The value of perirenal air insufflation as a localizer of adrenal tumors is demonstrated.

HOWARD I. SUBY and FULLER ALBRIGHT, Massachusetts General Hospital, Boston:

Mechanical Problems in the Retrograde Dissolution of Urinary Stones with Solution G: Glass models of kidneys containing stones show various surgical and cystoscopic methods used in dissolution of these stones with solution G. The exhibit also introduces a new automatic irrigator which works by electricity. Charts, drawings and roentgenograms show mechanical problems encountered in stone dissolution and how they may be managed.

VICTOR F. MARSHALL, WILLET F. WHITMORE JR., MORRIS SCHMITTMAN, MAUS STEARNS and ARCHIE L. DEAN JR., Cornell University Medical College, New York:

Pyelographic Results of Ureterointestinal Anastomosis by the Coffey I Method: A demonstration by means of photographs of roentgenograms of results obtained after ureterointestinal anastomosis, compared with preoperative films. Several mounted specimens obtained at autopsy will show further correlations. Early and late pyelographic results will be compared. A résumé of approximately 100 consecutive cases will accompany the presentation and a brief set of conclusions.

F. C. HENDRICKSON, Canton, Ohio:

A Visualizing Lithotrite: The new lithotrite has the following features incorporated in its design: (*a*) excellent vision between the jaws close to the field of operation, (*b*) adequate flow of water, (*c*) strength of jaws sufficient to crush stones up to 2 cm. in diameter. The method of using the lithotrite will be demonstrated. Samples of all other well known types of lithotrites will be at hand for comparison and for demonstration of the evolution of the instrument.

HENRY SANGREE, HOWARD FRETZ, JOHN HUGHES and NORTON GROTH, University of Pennsylvania, Philadelphia:

Fertility in the Male—Surgical and Clinical Problems: A statistical survey of 300 consecutive cases of husbands of a barren marriage, whose wives had a previous examination by the gynecologist or the obstetrician. A report of seven epididymovasostomy operations with one successful result. Photographs of the successful completion of four Ombredanne operations for penile hypospadias. Photomicrographs in color of testicular biopsies from men showing azoospermia and oligozoospermia and the improvement under treatment of spermatogenesis shown by subsequent biopsies of the seminiferous tubules. A report of endocrine disorders causing infertility, particularly thyroid and pituitary gland disturbances, which occurred in 21 per cent of our series. Azoospermia was present in 12 per cent of men examined.

SEYMOUR F. WILHELM, Beth Israel Hospital, New York:

Diagnosis and Treatment of Diseases of the Adrenal Glands: The value of laminography, or tomography, in the roentgenographic delineation of the normal and the enlarged adrenal gland is demonstrated by a comparison of simple films with laminograms made following perirenal insufflation. Over seventy insufflations have so far been done on 46 patients suspected of suffering from disease of the adrenal gland, without serious sequelae. The diagnosis and surgical treatment of female pseudohermaphroditism, virilism and Cushing syndrome is illustrated by photographs, roentgenograms and transparencies of gross and microscopic slides.

Section on Orthopedic Surgery

The representative to the Scientific Exhibit from the Section on Orthopedic Surgery is David M. Bosworth, New York.

LEONARD F. BUSH, C. ZENT GARBER, WILLIAM H. VON LACKUM and JAMES P. MILLER, New York Orthopedic Hospital, New York:

Bone Bank and Homogenous Bone Grafts: Sources, use, storing preservation of bone are outlined. Results of experimental work on rabbits in grafting of homogenous and autogenous bone are shown, together with clinical results in the use of homogenous bone in the human being and comparative human autogenous and homogenous grafts.

ARTHUR C. STIRLING, Jackson Clinic, Madison, Wis.:

Intervertebral Disk Herniation: The exhibit is prepared with special reference to the protruding nucleus pulposus in the lumbar region, with the causes, symptoms, diagnostic tests, and the methods of treatment, conservative and surgical.

JOSEPH S. BARR, JOHN A. REIDY and JAMES R. LINGLEY, Massachusetts General Hospital, Boston, and EDWARD GALL, Bethesda Hospital, Cincinnati:

The Control of Epiphysial Growth by Roentgen Irradiation: The result of roentgen irradiation on growing epiphyses of experimental animals is demonstrated. This experimental work, which has been in progress for a number of years, shows that roentgen rays have a highly selective effect on growing epiphysial cartilage cells. The danger inherent in the therapeutic clinical use of roentgen irradiation on or near the joints of growing children is obvious.

STEPHEN S. HUDACK and CLAY RAY MURRAY, Columbia University College of Physicians and Surgeons, New York:

Matrix Variation in Bone Regeneration: Tissue reaction in relation to the type of matrix, artificial and otherwise, and the donor elements involved in the filling of bone defects and deficiencies are demonstrated. Wherever possible the matrix influence is correlated to bone healing.

J. E. M. THOMSON, C. F. FERCIOT, W. W. BARTELS, F. S. WEBSTER and F. P. STONE, Orthopaedic Clinic, Lincoln, Neb.:

Use of Reverse Dennis-Browne Splints in Congenital Pes Calcaneovalgus: Congenital pes calcaneovalgus is more common than generally appreciated. Photographs and roentgenograms together with models illustrate the diagnostic points and show the rationale of treatment with reverse Dennis-Browne splints and also indicate the type of case for which they are applicable.

FRANCIS M. POTTENGER JR., Francis M. Pottenger Jr. Hospital, Monrovia, Calif., and JOSEPH C. RISSER, Orthopaedic Hospital, Los Angeles:

Studies in Epiphysitis: Roentgenograms show various forms of epiphysitis and fragmentation of bones as they appear, beginning with those noted in the tarsal and metatarsal region at birth, the knees, the elbows and the spine. Posters describe the sequence of development and healing of the various epiphysitides and suggested methods of prevention. Illustrations of comparable conditions produced experimentally in the cat and rat are shown.

JAMES A. DICKSON, Cleveland Clinic, Cleveland:

Geometric Osteotomy for Ununited Fracture of Neck of Femur: A new operation for the treatment of ununited fractures of the neck of the femur is presented, combining the advantages of the osteotomy and the bone graft. The rotation of the head and upper end of the femur is accurately controlled by internal fixation. The geometric osteotomy restores the femoral neck, overcomes shortening and equalizes the length of the legs. The use of a cast is eliminated. Technic and end results are also shown.

BRADLEY L. COLEY and N. L. HIGINBOTHAM, Memorial Hospital, New York:

The Differential Diagnosis of Bone Tumors: Photographic reproductions of x-ray films mounted in pairs. Each pair shows similar appearing lesions with different diagnoses. The points in the differential diagnosis are enumerated in a printed para-

graph between the members of each pair. All phases of malignant and benign bone tumors are thereby covered in the sixty plates presented.

Section on Gastro-Enterology and Proctology

The representative to the Scientific Exhibit from the Section on Gastro-Enterology and Proctology is Donovan C. Browne, New Orleans.

HENRY A. RAFSKY, MICHAEL WEINGARTEN, CHARLES I. KRIEGER and WILLIAM F. HERZIG, Lenox Hill and Beth Israel Hospitals, New York:

Syphilis of the Stomach: The historical aspects of syphilis of the stomach, the incidence, symptoms, physical and laboratory findings and gastroscopic findings in the cases which have been reported in the literature are shown. An additional case with gastroscopic findings is reported. In this case intragastric photographs in color were taken in conjunction with the gastroscopies which were made at various stages of treatment. These photographs and x-ray films illustrate the lesions before and after treatment. Various therapeutic aspects of syphilis of the stomach and nonsyphilitic gastric lesions in patients who have syphilis will be demonstrated.

JOSEPH FELSEN and WILLIAM WOLARSKY, Bronx Hospital, Bronx, New York:

Acute and Chronic Bacillary Dysentery: Exhibit dealing with acute and chronic bacillary dysentery with particular reference to World War II. Studies on returning veterans and associated personnel in training and combat areas and follow-up studies on the incidence of regional ileitis and chronic ulcerative colitis are shown. General studies on the new epidemiologic, bacteriologic, clinical and therapeutic aspects are included, with the status of prophylactic vaccination. Teaching sets for physicians and public health workers will be presented.

CECIL O. PATTERSON, MILFORD O. ROUSE, JOHN S. BAGWELL and LEWIS WATERS, Southwestern Medical College, Dallas, Texas:

The Injection Treatment of Esophageal Varices: This exhibit shows by large drawings the anatomic bases of esophageal varices; it demonstrates their treatment diagrammatically; it shows roentgen ray results in several selected cases and gives typical patient histories and summary of work to date.

WILLIAM P. CHAPMAN, CHESTER M. JONES, FRANCIS D. MOORE and AUDREY DENNISON, Massachusetts General Hospital, Boston:

Gastrointestinal Motility: Studies of gastrointestinal motility have been made during resting conditions and in response to drugs and surgery of the autonomic nervous system. A four-channeled tube was employed connecting each of four balloons to separate water manometers. An attempt has been made to evaluate changes in tone and what is thought to represent mixing contractions and propulsive activity. The subjects represent both healthy individuals and patients with symptoms of the gastrointestinal tract, vagotomized patients and hypertensive patients following thoracolumbar ganglionectomy. The effects of drugs with cholinergic and spastic action, antispasmodics and procaine block of sympathetic ganglions have been noted.

ROBERT TURELL, New York:

Tattooing with Mercury Sulfide for Intractable Anogenital Pruritus: Clinical and histologic studies of tattooed pruritic skin are presented together with the therapeutic results obtained in a series of 93 cases, with statistical analysis. Neural studies to explain the modus operandi of this form of treatment are presented graphically. A new instrument for therapeutic tattooing is described.

LESTER M. MORRISON, College of Medical Evangelists, Los Angeles County General Hospital, Los Angeles:

Alcohol and the Liver—Effects and Treatment: The results of eight years' investigation of the clinical and pathologic changes in the liver resulting from an abnormal intake of ethyl alcohol are presented. Histologic changes in the liver, as secured by punch biopsy before and after treatment, are shown. The results of treatment by various new lipotropic agents such as a new choline carbonate, a new liver extract and high protein diet, are shown. The various forms and stages of the liver damaged by alcohol are described with particular reference to therapy and prognosis.

EDWIN BOROS, New York City Cancer Hospital, New York:

A New Flexible Esophagogastroscope: A metal spiral tip is employed in this instrument enabling ease and safety in introduction with no more mechanical difficulty than that required in the passage of an ordinary stomach tube. By means of a metallic rod the tube is straightened after it is introduced, so that an open passage is provided for visualization and instrumentation.

MANFRED KRAEMER and LEO H. SIEGEL, Presbyterian Hospital, Newark, N. J.:

Synthetic Resin, a New Antacid for Treating Peptic Ulcer: Various antacids that have been used in treating peptic ulcer are shown, and a comparison of their neutralizing effect on gastric juice with that of phenol formaldehyde type resins; a summary of clinical findings with the use of resins on a number of patients with peptic ulcer are included, together with a history of the development of resins as antacids.

HAROLD LINCOLN THOMPSON, Los Angeles:

Melena: A Study of Underlying Causes: Charts, diagrams and roentgenograms are presented illustrating cases of gastrointestinal bleeding wherein the predominant symptom was melena, as compiled from the records of the Los Angeles General Hospital.

LEO L. HARDT, JOHN S. COULTER and LEONARD P. BROST, Loyola University School of Medicine, Northwestern Medical School, and Cook County Post-Graduate School, Chicago:

Clinical and Local Effects of Antacids and Physical Therapy as Shown Gastroscopically: Comparative study of objective findings produced by various antacids and physical therapy in patients with gastric lesions as seen by grastroscopy and x-ray examination. The changes noted in the mucosa were also compared with the gastric secretory response. Gastric acidity curves, kodachrome pictures of the gastric mucosa and tables comparing the response to various antacids are shown. The Hardt and Schindler gastroscopes are demonstrated.

Section on Radiology

The representative to the Scientific Exhibit from the Section on Radiology is S. W. Donaldson, Ann Arbor, Mich.

LEWIS E. ETTER, Pinewood Farm, Warrendale, Pa.:

Postwar Views of Röntgen's Laboratory: An Exhibit of Photographs, Books, Correspondence and Papers Pertaining to Röntgen and the Discovery of X-Rays: Photographs with captions, showing the present state of the University of Würzburg and Röntgen's laboratory. Views of original tubes, films and other mementoes and views of Röntgen's birthplace and burial place are shown. A collection of previously unpublished correspondence between Röntgen and Professor P. Lenard of Heidelberg, who claims precedence in the discovery (these letters disprove his contentions), are included, with recent (1944) books of Lenard's detailing his claims. Data showing the way discovery of x-rays came about are presented.

J. GERSHON-COHEN and PHILIP J. HODES, Philadelphia:

Breast Cancer Roentgenology: The methods and technics for examining the breast roentgenographically are presented. The wide range of x-ray films of the normal breast are shown and compared with the various groups of abnormal conditions of the breast necessary to be acquainted with for differential diagnosis of breast cancer. The corresponding photomicrographs of biopsy and tissue material are part of the exhibit.

MAURICE LENZ, Columbia University, New York:

Radiocurability of Cancer: Curability of cancer by radiotherapy (roentgen ray, radium, radioactive substances) depends on the natural growth characteristics, extent, location, microscopic structure and inherent radiosensitivity of the cancer and on the radioresistance of the irradiated normal tissues, tolerance

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of the patient, dosage of radiation reaching the tumor and technic of radiotherapy. The relationship of these various factors to the five year freedom from clinical evidence of cancer is illustrated on transparencies.

LEO G. RIGLER, THOMAS B. MERNER and ROBERT SHAPIRO, University Hospital, University of Minnesota, Minneapolis:

Carcinoma of the Lung, Roentgen Diagnosis: Drawings and roentgenograms illustrate the multiformity of roentgen findings in bronchogenic tumors. Cases illustrate (1) the early signs of bronchogenic carcinoma, especially segmental, lobar or unilateral emphysema, (2) the other evidences of obstruction such as atelectasis and bronchiectasis, (3) the delineation and localization of the bronchial tumor by bronchography and (4) the usefulness of body section roentgenography (planigraphy) as a supplementary and substitute procedure for the delineation and localization of bronchial tumors.

WILLIAM E. HOWES, SIGFRIED W. WESTING, HERMAN BOLKER, RICHARD SHAPIRO and JOSEPH SKAPIER, Brooklyn Cancer Institute, Brooklyn:

Hodgkin's Disease: Charts show the historical and pathologic classification of clinical types, including locations of spread; statistical record of cases treated at Brooklyn Cancer Institute, methods of treatment and longevity; photomicrographs of various types and postradiation, and roentgenograms of interesting organoid involvement before and after radiation therapy.

JAMES F. KELLY, D. ARNOLD DOWELL, JOHN E. DOWNING and JAMES F. KELLY JR., Creighton University School of Medicine, Omaha:

Roentgen Rays in Prevention and Treatment of Infections—A Fifty Year Review: Considerable experimental and clinical evidence has accumulated in the past fifty years on the use of roentgen rays in prevention and treatment of infections. The old concept of heavy dosage, such as used in treating malignant conditions, has been universally discarded in favor of lower voltage and lower dose therapy in treating infections. It is now recognized that therapy of inflammations and the therapy of tumors are two entirely different procedures. Observations of many workers who assisted in establishing these facts will be presented. Roentgen rays in infections have definitely passed from the theoretical to the practical stage.

MARCY L. SUSSMAN and HAROLD NEUHOF, Mount Sinai Hospital, New York:

Angiography in the Differential Diagnosis of Intrathoracic Neoplasms: Roentgenograms and photographs of specimens illustrate the displacement, distortion and occlusion of superior vena cava and pulmonary vessels which occur in intrathoracic neoplasms.

JAMES E. LOFSTROM, St. Mary's Hospital, Wayne University College of Medicine, Detroit, and DONALD A. KOCH and RICHARD C. SCHNEIDER, Detroit:

Penetrating Cranial Wounds: A collection of roentgenograms demonstrate various types of penetrating wounds of the cranium, together with operative treatment. Pneumoencephalographic findings are presented which illustrate the early hydrodynamic compensations that occur following loss of cerebral tissue. Brain abscesses, cranio-orbital wounds and cerebral wounds are separately presented and some of the problems associated are demonstrated. Pneumoencephalographic findings in various stages of progress of these cases are shown, with color photographs of patients, gross specimens and correlated material.

VINCENT W. ARCHER, GEORGE COOPER JR. and NORMAN ADAIR, University of Virginia School of Medicine, University, Va.:

Clinical Manifestations of Disease Modified or Masked by Chemotherapy: Roentgenograms of various disease conditions are presented in which the symptomatology was either masked or modified by chemotherapy so that the conditions were not recognizable clinically. Empyema, lung abscess, necrotic mastoiditis, perirenal abscess, pelvic abscess following rupture of the bladder and osteomyelitis are shown. This exhibit emphasizes the increasing responsibility of the radiologist in diagnosis since the advent of specific antibiotics.

B. P. WIDMANN, HERMAN OSTRUM and RUSSELL MILLER, Philadelphia General Hospital, Philadelphia:

Problems in the Roentgenologic Differential Diagnosis of Pulmonary Lesions: The exhibit includes (1) malignant lung tumors simulating tuberculosis, abscess, pneumonia; (2) mediastinal tumors: (*a*) anterior, (*b*) posterior; (3) pulmonary cysts: (*a*) congenital, (*b*) acquired, (*c*) parasitic; (4) isolated tumors in lung simulating metastatic malignancy: (*a*) tuberculomas, (*b*) plasmocytoma, (*c*) Hodgkin's, (*d*) sarcoidosis; (5) lymphoblastomas: (*a*) Hodgkin's, (*b*) giant follicular lymphoadenopathy; (*c*) leukosarcomas; (*d*) reticulum cell sarcoma; (*e*) lymphatic leukemia; (6) pseudomediastinal neoplasm: (*a*) cold abscess, (*b*) aneurysm (aortic), (*c*) megaesophagus, (*d*) cardiac aneurysm, (*e*) lymphatic leukemia; (7) miliary nodulations: (*a*) metastatic malignancy, (*b*) lymphogenic malignant spread, (*c*) hemosiderofibrosis in cardiac decompensation.

LEE A. HADLEY, Syracuse, N. Y.:

Cervical Spine and Shoulder Studies: Exhibit of roentgenograms showing (1) relative positions of the bones of the shoulder girdle in adduction and abduction (*a*) normally, (*b*) acute trauma, (*c*) follow-up; (2) relative positions of the bones of the cervical spine in flexion and extension (*a*) normally, (*b*) acute trauma, (*c*) follow-up, (*d*) with degenerative and arthritic changes and (*e*) with some congenital anomalies; (3) atlanto-occipital fusion; (4) occipital vertebra; (5) basilar impression; (6) foramen magnum encroachment; (7) ossiculum terminale; (8) agenesis of cervical pedicles; (9) spontaneous subluxation of the atlas.

Section on Anesthesiology

The representative to the Scientific Exhibit from the Section on Anesthesiology is Urban H. Eversole, Boston.

JOHN ADRIANI and DAVID A. DAVIS, Louisiana State University and Charity Hospital, New Orleans:

Physiologic Changes During Spinal Anesthesia: Various physiologic changes resulting from denervation produced by intrathecal injection of local anesthetic drugs in man are summarized. Emphasis is placed on changes in the circulatory system, respiratory system and blood. Effects on the viscera caused by spinal anesthesia on the autonomic nervous system are also stressed.

GEORGE J. THOMAS and PAUL A. SICA, University of Pittsburgh School of Medicine, and St. Francis Hospital, Pittsburgh:

Management of Spinal Analgesia with Intravenous Sympathomimetic Agent: Charts, diagrams and electrocardiograms illustrate the value of intravenous neosynephrin in the minute to minute control of blood pressure during spinal analgesia.

MEYER SAKLAD, PRISCILLA SELLMAN and ELIHU SAKLAD, Rhode Island Hospital, Providence, R. I.:

Intraspinal Segmental Anesthesia: Models, charts, descriptive material of anatomy, physiology and pharmacology show a method for the limitation of spinal anesthesia to definite segments of the cord and the advantages thereto.

JAMES C. MCCANN, St. Vincent Hospital, Worcester, Mass.:

Neurophysiology of Respiration under Pentothal and Other Anesthetic Agents: Abdominal quietude and muscle relaxation during surgical anesthesia depends on the state of the abdominal muscles as accessory muscles of respiration. Their state reflects the physiologic response of respiration to surgical trauma. With reference to this problem quantitative and pneumographic observations were made in 2,500 cases. 1. Quantitative studies show the rate of utilization of pentothal to unconsciousness; to loss of motor response and acceptable anesthesia. Analysis was made of possible factors bearing on utilization (age, weight, length and type of operation). 2. Pneumographic recordings deal with the pharmacologic effects of pentothal on respiration; with specific reflex respiratory response to trauma from the

several neurologic segmental areas (cranial, cervical, thoracic, lumbar and sacral); with modifications of these responses by specific segmental block with procaine; with comparative pneumographic studies using spinal and ether and curare; with pneumographic observations on the integrated use of ancillary agents against specific reflexes. 3. Method of anesthesia (pentothal and local nerve block) presents data on safe fractionation of dosage; on pneumographic study of time factor to maximal effect; on reduction of utilization of pentothal by procaine nerve block; on rectus sheath block (transincisional) and anatomy of specific field blocks (intercostal, anterior splanchnic, pelvic, mesenteric and rectal).

RALPH M. WATERS, O. S. ORTH, F. J. POHLE, DONALD R. KINDSCHI and LUCIEN E. MORRIS, University of Wisconsin Medical School, Madison, Wis.:

One Hundred Years of Chloroform: Certain historical data are presented such as early publications, equipment and models of inhalers. Some results are presented of a current reevaluation of chloroform both in the laboratory and in the operating room.

DONALD E. HALE, W. JAMES GARDNER and HAROLD E. HARRIS, Cleveland Clinic, Cleveland:

Control of Bleeding During Operation by Induced Arterial Hypotension: The first result of blood letting on the general circulation is peripheral vasoconstriction. As the bleeding continues there then occurs a fall in blood pressure. Both of these factors may be used to reduce blood loss during surgical procedures. They can be brought into play by preoperative arterial puncture and blood letting followed by intra-arterial reinfusion of the removed blood at the close of the operation. This can best be accomplished by tying a cannula into the radial artery directed toward the heart and connecting this cannula to a pressurized system for the reception and reinjection of the blood. This procedure can be used to control massive bleeding such as may be encountered during the removal of an intracranial tumor or to control slight but troublesome bleeding such as that which hampers the otologist during a delicate fenestration operation. The procedure is safe because the arterial cannula, connected to a reservoir of the patient's blood, enables the operator to control the pressure in the aorta at all times.

Section on General Practice of Medicine

The representative to the Scientific Exhibit from the Section on General Practice of Medicine is J. Craig Bowman, Upper Sandusky, Ohio.

H. LEONARD BOLEN, Fall River, Mass.:

The Blood Pattern in Malignancy: Photographs and photomicrographs show the normal and malignant blood pattern. Charts show percentage of negative and positive cases and conditions yielding temporary cancer pattern; apparently cured carcinomas and a group of noncancer cases; group of proved cancer cases, together with histories of patients and technic of test.

WILLIS S. KNIGHTON and VIRGINIA SMITH BOYCE, Committee on Glaucoma, National Society for the Prevention of Blindness, New York:

The Physician's Part in Preventing Blindness from Glaucoma: Signs and symptoms of glaucoma recognizable during general physical check-up are shown, and information on testing technics is included.

LOUIS I. DUBLIN and MORTIMER SPIEGELMAN, Metropolitan Life Insurance Company, New York, and ROSCOE G. LELAND, Chicago:

Longevity and Mortality of Physicians: Charts show (*a*) American experience, derived from records of physicians furnished by the Bureau of Medical Economic Research of the American Medical Association. The current expectation of life of physicians is compared with that of the current general population. A detailed analysis is made of causes of death, according to age, among physicians; comparisons are made with corresponding data for the general population of the United States. A map is prepared showing the geographic variation of mortality among physicians within the United States. (*b*) British experience. The mortality of physicians is compared with that of other professions.

WILLIAM BENHAM SNOW, College of Physicians and Surgeons, New York:

A Program in Physical Medicine: The exhibit includes (1) the educational program at the College of Physicians and Surgeons, including training courses for therapists in occupational and physical therapy, and postgraduate instruction in physical medicine including fellowships under the Baruch grant, orientation to nurses and other groups; (2) research in physical medicine now going on under the Baruch grant; (3) physical and occupational therapy service and its operation at the Presbyterian Hospital, Vanderbilt Clinic and allied hospitals. Special attention is given to the cerebral palsy problem, posture and occupational therapy in the curative workshop and at bedside for improvement in body function.

H. L. FOSS and HENRY F. HUNT, George F. Geisinger Memorial Hospital, Danville, Pa.:

The Rural Medical Center under the Group Practice Plan: The development of a rural medical center and the various departments providing diagnostic facilities to physicians referring patients for problems in diagnosis and treatment is presented, together with the role that such a center plays as an educational institution: for (*a*) interns, (*b*) residents, (*c*) physicians of the surrounding areas, (*d*) nurses, (*e*) technicians. For the community as a whole it is shown how such a center may assist in safeguarding the public health by furnishing laboratory and hospital facilities and by instructing the layman in medical and public health problems. Basically the exhibit emphasizes what may be done by the coordination of professional effort in a medical center serving a far flung rural area.

CARL REICH, Lenox Hill Hospital, New York:

A Clinical Atlas of Sternal Bone Marrow: Diagrams and charts illustrate the various steps in performing a sternal puncture and processing the material. In addition there are twenty-five large kodachrome reproductions of various bone marrow pictures, with detailed descriptions covering the most important hematologic conditions.

A. W. OUGHTERSON and G. W. LARIMORE, American Cancer Society, Inc., New York:

The Cancer Problem Today: A graphic and diagrammatic presentation of the cancer problem today is presented, with especial reference to the role of the general practitioner in the reduction of cancer morbidity and mortality.

ALEXANDER S. WIENER, Office of the Chief Medical Examiner, New York City, and Jewish Hospital, Brooklyn:

Rhesus Blood Factors in Clinical and Legal Medicine: The exhibit covers the most important facts of the Rhesus factor field. The Rh-Hr blood types, their mechanism of heredity and racial distribution and their application in disputed parentage are shown. Tests for Rh sensitization: agglutination test, blocking test and conglutination test, and application in blood transfusion, pathogenesis of erythroblastosis and serologic diagnosis, are presented. Treatment of erythroblastosis by complete exchange transfusion is included.

ELLA BEST, American Nurses' Association, New York:

Nurses and Nursing: The exhibit consists of charts, graphs and other illustrative material showing the activities of the American Nurses' Association.

W. C. COLBERT and L. W. KIBLER, State Medical Association, Postgraduate Committee in Cancer, University Center, Memphis:

Postgraduate Medical Education: The exhibit includes two maps of Tennessee, one showing location of teaching and instruction centers for a two year program of extension medical postgraduate teaching in gynecology just completed; the second, the instruction program graphically portrayed for the two year

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cancer program recently opened. Charts will show the contributing agencies, committee of administration and résumé of the past ten years of postgraduate teaching in Tennessee.

C. C. GREY, O. L. OSTEEN, J. D. RAY, H. W. SCHOENING and L. VAN ES, American Veterinary Medical Association, Chicago:

Swine Erysipelas: The exhibit shows the animals which may be infected with Erysipelothrix rhusiopathiae, the variety of manifestations of the infection, research findings and control methods and the known geographic distribution of the disease.

LAWRENCE J. LINCK, National Society for Crippled Children and Adults, Chicago:

Services to the Handicapped: The exhibit includes pictures and slides, with descriptions illustrating health, welfare, education, recreation, rehabilitation and employment services for crippled and handicapped persons; special emphasis is placed on services for cerebral palsied children.

G. FOARD MCGINNES, The American National Red Cross, Washington, D. C.:

Blood Donor Service: The exhibit shows the role of the American Red Cross in meeting needs for blood and useful blood derivatives for civilian medicine.

MISCELLANEOUS EXHIBITS

Exhibits on various miscellaneous subjects are shown under this heading. They include a group of exhibits on diabetes together with the question and answer conference on diabetes, and the exhibits of the United States Army, United States Navy and the Veterans Administration.

KATHARINE R. BOUCOT, DAVID A. COOPER and RUSSELL RICHARDSON, Philadelphia County Medical Society and Philadelphia Tuberculosis and Health Association, Philadelphia:

Philadelphia Diabetic Survey: Photofluorograms with abstracts of case histories on some of the significant cases uncovered during the survey of 3,167 diabetic patients during the year 1946. (Of the first 2,867 analyzed, the percentage of reinfection type tuberculosis was 8.3.)

HOWARD, F. ROOT, ELLIOTT P. JOSLIN, PRISCILLA WHITE, ALEXANDER MARBLE, C. CABELL BAILEY and ALLEN P. JOSLIN, George F. Baker Clinic, New England Deaconess Hospital, Boston, and Herbert H. Marks, Metropolitan Life Insurance Company, New York:

Diabetes Mellitus: New data are presented based on follow-up of patients to indicate the changing life expectancy in diabetes. Treatment of complications including retinopathy, pregnancy, acidosis and gangrene is discussed and information concerning experimental diabetes shown. The importance of early detection of diabetes is emphasized and demonstrated by laboratory methods.

SAUL S. SAMUELS, Stuyvesant Polyclinic, New York:

Diabetic Gangrene: Photographs and kodachrome slides show classification of diabetic gangrene, indications for conservative treatment, methods of conservative treatment, indications for amputations, methods of amputations and value of penicillin and other drugs.

HUGH L. C. WILKERSON, Diabetes Section, United States Public Health Service, JOSEPH H. BARACH and FRANK N. ALLAN, American Diabetes Association, Boston:

Diabetes in the United States: The activities of the American Diabetes Association in helping physicians and patients to meet the problems of diabetes are presented. The results of the diabetes program of the United States Public Health Service are demonstrated, with statistics on the incidence of diabetes as revealed by the case finding study in Oxford, Mass.

RANICE W. BIRCH DAVIS, Association of Medical Illustrators, Johns Hopkins School of Medicine, Baltimore:

The Development of Medical Illustration: The exhibit shows the historical development of medical illustration from the earliest times. Emphasis is placed on its growth in America during the last hundred years and its present status and relation to medical illustration. Material consists of original drawings, enlarged photographic prints of old engravings, and ancient anatomic and medical illustrations, models and a brief description of the Association of Medical Illustrators.

S. J. MCCOMB, Mayo Clinic, Rochester, Minn., ALBERT LEVIN and ANNE SHIRAS, University of Pittsburgh, Pittsburgh:

Preparation of Photographs for Publication and Projection: The exhibit illustrates the requirements which should be met by photographs taken for publication. Successful illustrations in black and white and color are shown and their preparation is explained. Examples are also given of the right and wrong way to prepare charts, graphs and typewritten material for lantern slide demonstration. The exhibit will be attended at all times by a photographer qualified to answer questions about the materials, apparatus and methods used in the various fields of medical photography, with data collected by the Biological Photographic Association.

E. FULLERTON COOK, United States Pharmacopeial Convention, Philadelphia:

The United States Pharmacopeia: The exhibit reviews briefly the history of the United States Pharmacopeia for the past hundred years but emphasizes the new Pharmacopeia, the Thirteenth Revision of which became official April 1, 1947. An indication of the international character of the Pharmacopeial Standards is presented.

ROBERT P. FISCHELIS, American Pharmaceutical Association, Washington, D. C.:

A Century of Progress in Drug Standardization: The exhibit illustrates the activities of the American Pharmaceutical Association in the evolution of unofficial and official standards for drugs since it was founded in 1852. Special emphasis is laid on the part played by the laboratory and other scientific facilities of the Association and its members in the establishment and revision of the National Formulary as one of the official compendia recognized under federal and state food, drug and cosmetic acts.

META R. COBB, American Occupational Therapy Association, New York:

Occupational Therapy: The exhibit depicts the major functions of occupational therapy in the treatment of patients. Photographs and legends illustrate occupational therapy for morale, general fitness, to increase joint function, to compensate for residual handicaps, for mental illness, for unadjusted youth and the aged, for mental health and for prevocational training. A pictorial chart illustrates the relationship of the various medical adjuncts to the treatment relationship between doctor and patient.

WARREN P. MORRILL, American Hospital Association, Chicago:

Improving the Quality and Quantity of Hospital Care: This exhibit describes the major programs of the American Hospital Association which have for their purpose the improvement of the quality and quantity of hospital care in America. Accomplishments attained, current programs being conducted and national programs being developed will be graphically summarized.

EVERETT S. ELWOOD, National Board of Medical Examiners, Philadelphia:

National Board of Medical Examiners: The exhibit describes the work and progress of the National Board of Medical Examiners and includes graphic presentation of the results of its examinations.

ADA M. HILL, American Hearing Society, Washington, D. C.:

The Conservation of Hearing: Charts, posters, photographs and dioramas show the progress in the conservation of hearing program during the past century. Literature on hearing tests, lip reading, hearing aids, auditory training and the hard of hearing child and adult will be distributed.

HART E. VAN RIPER, MORTON A. SEIDENFELD, CATHERINE WORTHINGHAM and ROLAND H. BERG, National Foundation for Infantile Paralysis, Inc., New York:

Infantile Paralysis: A graphic presentation of the diagnostic criteria of acute anterior poliomyelitis. Historical review of physical therapy in the treatment of the disease. The role of general hospitals in providing care for the poliomyelitis patient.

MAURICE B. VISSCHER, A. B. BAKER, R. BROWN, JOHN ADAMS, ALAN HEMINGWAY, R. ANTHONY and J. ELAM, University of Minnesota, Minneapolis:

The Physiologic Problems of Bulbar Poliomyelitis: A graphic visualization of the physiologic problems in the management of bulbar poliomyelitis. Presentations will be made of the various categories of involvement and their specific therapeuses. Lectures on the principles involved and demonstrations of treatment procedures will be made at stated intervals during exhibit hours.

United States Army, Medical Department, Washington, D. C.

The SURGEON GENERAL presents a display of transparencies showing clinical and pathologic aspects of atomic warfare.

The AIR SURGEON of the Army Air Forces presents graphically a résumé of various technics and displays certain instruments developed primarily to meet combat emergencies, which have been given to the general public to aid clinical medicine throughout the nation. The exhibit includes the technic of catheterizing the right ventricle and auricle through the cubital vein; studies on the Burns, Bennett and Emerson models of pneumatic balance resuscitators, performed at Bellevue Hospital under the Columbia Division; the 0.85 lens which can be used for photographing a fluorescent screen, thus eliminating the need for numerous x-ray plates and a demonstration of the oximeter.

The MEDICAL CONSULTANTS DIVISION displays by a series of transparencies and graphic studies certain aspects of tuberculosis which are of value to the general practitioner.

The SURGICAL CONSULTANTS DIVISION displays moulages, graphic illustrations and photographs showing progress studies and essential phases of technics concerned with the utilization of an intramedullary nail in the treatment of certain fractures and interesting aspects of various amputation technics.

The PREVENTIVE MEDICINE DIVISION displays pictures and graphic illustrations depicting the interrelationship of the Surgeon General's Office, the Medical Nutrition Laboratory and the Research and Development Board; the missions of the Army Nutrition Laboratory in connection with studies on troops, treatment of disease and feeding of civilians of occupied countries; the activities of army nutritionists; the relationship of nutrition to health and fitness in troops, and the importance of nutrition in the management of patients.

The EDUCATION AND TRAINING DIVISION presents a graphic display showing the utilization of medical officers within the Army as a result of the recently organized career plan, the technical training given to those who assist the professional personnel and essential data on hospital facilities of value and interest to physicians and surgeons.

The RESEARCH AND DEVELOPMENT DIVISION presents a display showing the fabrication, testing and utilization of a recently developed upper extremity prosthesis.

The VETERINARY SERVICE of the Medical Department presents certain important phases of the Food Inspection Service by kodachrome pictures, displays several items of food inspection and analysis equipment which have been developed or approved recently by the Army, and demonstrates some of the important new developments in methods of chemical and bacteriologic analyses of food products. Selected pictures, slides and photomicrographs depict important results of the research studies conducted by the corps, while features of the veterinary service for animals are shown by photographs.

The PHYSICAL MEDICINE exhibit depicts objectively the utilization of physical treatment methods through the integration and coordination of the triad Physical Therapy, Physical Reconditioning and Occupational Therapy which Physical Medicine in the Army embraces. Emphasis is placed on the approach to prescribed levels of treatment in these three branches by a medical officer who is a specialist in physical medicine.

The DENTAL DIVISION display shows recent developments in acrylic prostheses pertinent to all types of reconstructive procedures, fixation of fractures of the maxillomandibular region and progress studies of reconstruction cases.

The ARMY INSTITUTE OF PATHOLOGY presents by colored transparencies and photographs pathologic studies of certain intraocular tumors, peripheral nerve injuries, cold injuries, virus hepatitis and mouth infections.

United States Navy, Bureau of Medicine and Surgery, Washington, D. C.

Operations Crossroads: The exhibit portrays the medical research projects and preventive measures instituted at Operations Crossroads when the atomic bomb was tested. Two of the goats which were used at Bikini as experimental animals will be shown, with hematologic charts on the animals from the first bomb visit to the present time.

Veterans Administration

A group of exhibits is presented by the Veterans Administration, Washington, D. C., under the direction of General Paul R. Hawley.

RALPH K. GHORMLEY, Mayo Clinic, Rochester, Minn., and Veterans Administration, Washington, D. C. and T. McD. ANDERSON, Veterans Administration, Washington, D. C.:

Orthopedic Braces: Exhibit presents modifications and new developments by Veterans Administration in the design and manufacture of orthopedic braces.

HAROLD F. BISHOP, Veterans Administration Hospital, Bronx, New York:

Endotracheal Anesthesia: Exhibit consists of a series of panels, each dealing with a different aspect of endotracheal anesthesia. Among the topics covered will be history, anatomy, technic, indications and contraindications, topical agents used with, apparatus for, and complications of.

A. EARL WALKER, University of Chicago School of Medicine, Chicago, and Veterans Administration, Washington, D. C., and WILLIAM G. LENNOX, Harvard Medical School, Boston, and Veterans Administration, Washington, D. C.:

Post-Traumatic Epilepsy: Neurologic aspects of post-traumatic epilepsy are shown, and advances in its diagnosis and treatment are demonstrated.

TUBERCULOSIS DIVISION, Veterans Administration, Washington, D. C.:

Streptomycin: Presentation of a series of cases showing the effects of streptomycin in the treatment of tuberculosis.

J. M. NIELSEN, University of Southern California, Los Angeles and Veterans Administration, Washington, D. C.

Mechanics of Aphasia, Apraxia and Agnosia: Recent studies and the application of their results to the treatment of post-traumatic stages in veterans.

MOTION PICTURES

Three motion picture theaters, located in rooms adjacent to the exhibits, will be in continuous operation. Each film will be shown once daily, Monday noon to Friday noon, on a definite schedule.

UNITED STATES ARMY, Medical Department, Washington, D. C.:

Repair of Ruptured Membranous Urethra: Silent, color, ten minutes.

Yaws: Sound, color, twenty minutes.

The Preparation and Insertion of Tantalum Plate: Sound, color, thirty minutes.

Technic of Open Amputation: Sound, color, eleven minutes.

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Therapeutic Exercises (Thoracic Surgery): Sound, twenty-eight minutes.

Cine Plastic Operation: Sound, color, seventeen minutes.

Operations Crossroads: Sound, color, twenty-five minutes.

J. ERNEST AYRE, Royal Victoria Hospital and McGill University, Montreal, Quebec:

"Precancer" Diagnosis of the Cervix by Cytology: Motion picture demonstrating the use of a new method of uterine cancer diagnosis—the selective cytology technic. While not a biopsy, and not a smear, the selective method is a scraping from the squamocolumnar junction of the cervix by means of a specially adapted cervical applicator. The scraping gives a true "surface biopsy" of this area, so vulnerable to the development of squamous carcinoma. The test is simply and painlessly taken during the course of a routine gynecologic examination. Silent, color, fifteen minutes.

CARROLL L. BIRCH and LOUIS R. LIMARZI, University of Illinois College of Medicine, Chicago:

Physiology and Pathology of the Hemopoietic Principle: Motion picture showing pictures of blood and bone marrow in the megalocytic anemias. Patients with pernicious anemia, sprue, cirrhosis of the liver and aplastic anemia are demonstrated. Silent, color, twenty minutes.

JAY M. GARNER and J. PEERMAN NESSELROD, Evanston Hospital, Evanston, Ill.:

The Sigmoid, Rectum and Anal Canal: Motion picture showing endoscopic views of the normal bowel, diverticulosis, melanosis coli, anal infection, lymphogranuloma venereum, tuberculosis enterocolitis, chronic ulcerative colitis, polyp with fulguration and carcinoma of the rectum. Silent, color, thirty minutes.

ANDREW B. RIVERS, NATALIE M. BRIGGS and MAURICE H. STAUFFER, Mayo Clinic, Rochester, Minn.:

The Syndrome of Duodenal Ulcer Perforating to the Pancreas: Motion picture showing that there are certain characteristics such as a shift of pain to new areas and a postural method of relief that patients assume which aids in recognition of the complication. Silent, color, twenty-five minutes.

LEO L. HARDT and E. C. OLSON, Loyola Medical School and Cook County Post-Graduate School, Chicago:

Gastroscopy as an Aid in the Diagnosis and Treatment of Gastric Disease Conditions: Motion picture showing: 1. A typical gastroscopic clinic, demonstrating the preparation of the patient and the technic of gastroscopy. A brief description of the Hardt gastroscope, together with comments as to its limitations. 2. Gastroscopic study of the physical appearance of various antacids introduced in the stomach, compared with a new antacid mixture. Sound, color, thirty minutes.

COMMITTEE ON MEDICAL MOTION PICTURES, American Medical Association, Chicago:

The Evolution of Medical Motion Pictures: Motion picture consisting of excerpts from several films made prior to, during and following World War I. The first surgical motion picture taken on 16 mm. film is included. Examples of modern technics such as animation, microcinematography, endoscopic photography and moving x-rays are illustrated. The final sequence provides a brief behind the scenes look into the production of good teaching film. Sound, color, thirty-five minutes.

HUGH A. GAMBLE, Gamble Brothers and Archer Clinic, Greenville, Miss.:

Interinnomino Abdominal Amputation of the Lower Extremity for Malignant Growths with Indications for the Extension of its Employment: Motion picture describing the operative procedures. Silent, color, twenty-seven minutes.

I. W. MAGILL, Westminster Hospital, London, England:

Technic of Anesthesia—Handling and Care of the Patient: Motion picture dealing with the general care of the patient. Sound, twenty-six minutes.

I. W. MAGILL, Westminster Hospital, London, England:

Endotracheal Anesthesia: Without a clear airway the administration of a general anesthetic is impossible. This film shows how endotracheal anesthesia overcomes this difficulty by intubation of the larynx. Both oral and nasal methods are given in some detail. Animated diagrams and shots taken actually down a laryngoscope show the principles involved in using this instrument, while slow motion photography elucidates the movements required for "blind" nasal intubation. The advantages of endotracheal anesthesia are summarized. Sound, twenty-six minutes.

JOHN C. ULLERY, Upper Darby, Pa.:

Continuous Spinal Analgesia in Cesarean Section: Motion picture shows the anatomy and technic of continuous spinal analgesia for performing a cesarean section. Silent, color, forty-three minutes.

H. F. HAILMAN, Medical Department, Upjohn Company, Kalamazoo, Mich.:

Energy Release from Food: Motion picture with animation shows the enzymatic role of the vitamins of the B complex in the metabolism of food. The picture explains, on a biochemical basis, the need for vitamins of the B complex in various clinical conditions. Sound, color, twenty-six minutes.

A. H. BULBULIAN, Mayo Clinic, Rochester, Minn.:

Technic of Prosthetic Restoration of the Face: Motion picture dealing with some of the recent developments in the technic of facial reconstructions by the prosthetic method. It shows the important steps of the procedure, such as taking the necessary impression of the site of the deformity, preparation of the temporary wax model of the proposed prosthesis, making the final mold and methods of coloring and processing the prosthesis in latex and plastic. Silent, color, fifteen minutes.

J. E. M. THOMSON, C. F. FERCIOT and W. W. BARTELS, Orthopedic Clinic, Lincoln, Neb.:

The Reverse Dennis-Browne Splint as Used in Treatment of Congenital Calcaneovalgus: Calcaneovalgus tendencies of a congenital nature are more common than recognized. These babies tend to sleep on the abdomen with the toes turned outward. Dorsum of feet can be readily approximated to the outer aspect of the leg, and there is decided prominence of the heel. Unless this tendency is corrected, definite structural weakness of the feet develops which delays walking and may result in permanent foot disability. Early correction is urged. Application of reverse Dennis-Browne splints to hold feet in position of overcorrection is demonstrated and the indications are discussed. Silent, color, twelve minutes.

RUDOLPH JAEGER, Jefferson Hospital, Philadelphia:

Removal of Intraorbital Tumor by Intracranial Approach: Motion picture presenting removal of a dermoid cyst from within the orbit by intracranial craniotomy approach. Appearance of patient before and after operation as well as operative procedure is shown. Silent, color, eighteen minutes.

HAROLD C. VORIS, Loyola University Medical School, Chicago:

Ventriculography: Motion picture illustrating the technic of ventriculography by the usual posterior route and also the frontal and lateral route. Artist's diagrams are included in the film. Silent, color, thirty-five minutes.

L. E. HOLMGREN, Jackson Clinic, Madison, Wis.:

Varicose Veins—Diagnosis and Treatment: Motion picture demonstrating the various diagnostic tests and the application of these tests to various patients. The operative technic of a high saphenous ligation is shown followed by the postoperative tests made to demonstrate the need, if any, for further treatment. Silent, color, thirteen minutes.

LESTER R. DRAGSTEDT and PAUL V. HARPER, University of Chicago, Chicago:

Section of the Vagus Nerves to the Stomach in the Treatment of Peptic Ulcer: Motion picture illustrating the technic of transabdominal section of the vagus nerves to the stomach, together

with a brief statement of the theoretical basis for this operation. Silent, color, approximately twenty minutes.

MALCOLM T. MACEACHERN, American College of Surgeons, Chicago:

Anomalies of the Bile Ducts and Blood Vessels and Strictures of the Common Duct: Motion picture demonstrating the most common anomalies of the bile ducts and blood vessels and strictures of the common duct and their surgical repair. Silent, color, forty minutes.

HERBERT R. HAWTHORNE, Graduate Hospital, University of Pennsylvania, Philadelphia:

Transthoracic Resection for Carcinoma of the Cardiac End of the Stomach: Motion picture for teaching graduate students in surgery at the University of Pennsylvania, showing the entire technic from beginning to end. Captions describe the anatomy and technic as the operation progresses. The surgical anatomy involved is clearly shown. The placing of the sutures between the gastric tube and the esophagus is further classified by a drawing with explanatory captions. Silent, color, twenty-five minutes.

A. W. OUGHTERSON and G. W. LARIMORE, American Cancer Society, Inc., New York:

The Traitor Within: Motion picture, with animation, telling the medical facts about cancer in understandable terms. It presents the growth and development of cells; the spread of cancer through the body; the control and cure of cancer through the use of surgery, roentgen rays and radium. While this picture is not a technical film designed primarily for physicians, it is believed that it will be of interest to them since it portrays by animation in technicolor the malignancy process. Sound, color, eleven minutes.

HENRY SANGREE, HOWARD FRETZ, JOHN HUGHES and NORTON GROTH, University of Pennsylvania, Philadelphia:

Fertility in the Male, Surgical and Clinical Problems: Motion picture showing (1) the epididymovasostomy operation, (2) the Ombredanne operation (penile hypospadias). Preliminary photographs of the subject of infertility in the male are shown with consecutive stages in the operation to their completion, using cadavers for difficult procedures and then operative room technic. A statistical report on 300 consecutive men examined is included. Silent, color, eighteen minutes.

R. H. FLOCKS, University of Iowa School of Medicine, University Hospitals, Iowa City:

Ureterointestinal Anastomosis—A New Method: Motion picture presenting a new method for ureterointestinal anastomosis based on the principle of preservation of ureteral blood supply at the point of the anastomosis. The method is described briefly and then illustrated on a patient. The results are illustrated with pyelograms taken late after the procedure. Silent, color, thirty minutes.

ALFRED IASON, Adelphi Hospital, Brooklyn:

Repair of Bladder Hernia: Motion picture showing that one of the causes of so-called recurrence of inguinal hernia is an overlooked or improperly repaired bladder protrusion through the inguinal triangle. The indirect component is repaired and the bladder protrusion is exsected as though it were diverticulum, and repair then consummated. Silent, color, twelve minutes.

M. M. MELICOW, J. ROBINSON and WILLIAM IVERS, Squier Urological Clinic, Presbyterian Hospital, New York:

Interstitial Cell Tumor of Testis: Motion picture illustrating the effect on a 5½ year old boy of an interstitial cell tumor which was present in his right testis. The boy was big for his age, his external genitalia were like those of adult, the pubic hair grew. Silent, color, five minutes.

D. O. FERRIS, Mayo Clinic, Rochester, Minn.:

Total Cystectomy with Bilateral Ureterosigmoidostomy for Carcinoma of the Bladder (one stage): Motion picture showing detailed technic of a one stage cystectomy with bilateral ureterosigmoidostomy. Silent, color, twenty minutes.

ROGER W. BARNES and R. THEODORE BERGMAN, College of Medical Evangelists School of Medicine, Los Angeles:

Use of the Calf for Surgical Training and Research: Motion picture outlining the advantages of the use of calves for animal surgery in the training of residents and fellows and for surgical research. A ureterointestinal anastomosis is shown being performed by two first year residents in urology. Silent, color, twelve minutes.

PAUL F. FLETCHER, St. Louis University School of Medicine and St. Louis County Hospital, St. Louis:

Abdominal Colpocystopexy for Complete Prolapse of the Bladder and Vagina: A presentation of the rectus suspension principle of operative treatment for complete prolapse of the bladder and vagina following panhysterectomy. Technic is shown in detail, whereby living fascial strips mobilized from the anterior sheath of the rectus muscle on each side are employed to effect permanent restoration of normal visceral relationships of these structures in the pelvis. The construction of a "crossed suspender support" for the base and posterior wall of the bladder is demonstrated. Physical findings on examination one year and five years after operation are included. Silent, color, eighteen minutes.

SPECIAL EXHIBIT COMMITTEE ON PHYSICAL MEDICINE: The following motion pictures are presented in connection with the Special Exhibit on Physical Medicine:

Rehabilitation of Chronic Neurologic Cases: Motion picture prepared by the Veterans Administration and presented in connection with the exhibit on Physical Rehabilitation for Hemiplegia. Sound, twenty minutes.

Cineplastic Prosthesis in the Elbow of the Amputee: Motion picture prepared by Henry H. Kessler, Newark, N. J., and presented in connection with the exhibit on Physical Rehabilitation of Amputees. Silent, ten minutes.

Training of the Amputee in Walking: Motion picture prepared at Hasbrouck Heights Amputee Clinic and presented in connection with the exhibit on Physical Rehabilitation of Amputees. Silent, eighteen minutes.

Comeback: Motion picture prepared by U. S. Office of Vocational Rehabilitation. Sound, color, twenty-six minutes.

Be Your Age: Motion picture prepared by Metropolitan Life Insurance Company and American Heart Association. Sound, eleven minutes.

Half a Chance: Motion picture prepared by the Surgeon General's Office, U. S. Army. Sound, eleven minutes.

The Sky Is the Limit: Motion picture prepared by the Surgeon General's Office, U. S. Army. Sound, color, twenty minutes.

Convalescent Care and Rehabilitation of Patients with Injury of the Spinal Cord: Motion picture prepared by the Surgeon General's Office, U. S. Army. Sound, color, forty-one minutes.

HARRY WALLERSTEIN, Jewish Memorial Hospital, New York:

Treatment of Erythroblastosis Fetalis by Substitution Transfusion: Motion picture giving a brief résumé with pathologic slides of the significant pathologic changes in erythroblastosis. Kernicterus and histologic slides of the significant liver changes, as well as peripheral blood smear, are included. The technics of the procedures described are enumerated step by step and illustrated by actual performance on the screen. Charts are included in the film to show comparative results. Methods using the superior sagittal sinus, the radial artery and superficial veins are included. Silent, color, twenty-five minutes.

OTTO STEINBROCKER, NORMAN SPITZER and H. HAROLD FRIEDMAN, Bellevue Hospital, New York University, New York:

The Shoulder-Hand Syndrome (Reflex Dystrophy of the Upper Extremity): Motion picture of combined shoulder-hand disorders showing signs of reflex neurogenic dystrophy. Cases of varied etiology with this syndrome and their evolution are illustrated, together with descriptions of the clinical course and

diagrams of the presumed physiologic mechanism. A classification of these disorders is included. Present treatment is outlined. Silent, color, twenty minutes.

PHILIP THOREK, Cook County and American Hospitals, Chicago:

Congenital Diaphragmatic Hernia: Motion picture presenting an unusual case of congenital diaphragmatic hernia in a 7 weeks old infant. The diagnosis is discussed and the x-ray film shown both preoperatively and postoperatively. An animated section of the film is devoted to the abnormal anatomy and the embryologic defect presented, in this case a congenital absence of the left diaphragmatic crus. The operation shows cutting the left triangular ligament of the liver as an aid to exposure and repair of the hernia. The steps of the surgical repair and the replacement of viscera are clearly shown. A new method of closure of the abdominal wall is depicted. Silent, color, fifteen minutes.

JAMES BARRETT BROWN and FRANK MCDOWELL, Washington University School of Medicine, St. Louis:

Neck Dissections for Metastatic Carcinoma: Motion picture showing one operation of complete unilateral neck dissection for metastatic carcinoma from the mouth, together with later pictures of patients cured from five to fifteen years by this procedure. One of the patients shown has been well following operation for a metastatic melanoma eleven years ago. Silent, color, twenty-one minutes.

BERNARD D. JUDOVICH and WILLIAM BATES, Graduate Hospital School of Medicine, University of Pennsylvania, Philadelphia:

Scalenus Anticus Syndrome: Motion picture of patients suffering with symptoms of scalenus anticus syndrome. Detailed explanation of etiology, symptomatology, diagnosis and treatment is presented, with differentiation of primary and secondary scalene syndromes. Simplified hypo-needle technic for diagnostic and therapeutic infiltration is shown. Cases which clinically simulate the pain of coronary disease are presented. Electrocardiograph changes induced by compression of the scalene muscle is included. Silent, color, twenty minutes.

ALFRED IASON, Adelphi Hospital, Brooklyn:

Repair of Sliding Hernia: Motion picture showing that difficult sliding hernias can be readily cured by careful dissection of transversalis fascia from peritoneum. One leaflet of transversalis fascia is then sutured to peritoneum as though both were part of the sac. Silent, color, twelve minutes.

W. M. ADAMS, Memphis, Tenn.

The Correction of Facial Paralysis by Muscle Transplantation: Motion picture showing the correction of complete facial paralysis by multiple muscle substitution. A pedicle of the masseter muscle is transplanted in a region of the corner of the mouth to give support and motion to this region. The temporalis muscle is dissected up from the head of the coronoid process and a portion transferred into the upper and lower eyelids to give support to the lower eyelid and permit the patient to open and close the eyelids. A portion of the opposite frontalis muscle is transferred across the midline of the forehead into the muscle and subcutaneous tissue of the supraorbital region to give support to the eyebrow and restore a certain amount of motion upward. Silent, color, twenty-seven minutes.

ALFRED BLALOCK, Johns Hopkins Hospital, Baltimore:

Surgical Treatment of Pulmonic Stenosis: Motion picture begins with preoperative views of a 5 year old cyanotic child with a diagnosis of the tetralogy of Fallot. The child is then anesthetized, the right pleural cavity is opened, the right pulmonary artery is exposed, and the right subclavian artery is exposed. The proximal end of the right subclavian artery is anastomosed to an opening in the side of the right pulmonary artery, an end to side anastomosis. Incisions in the mediastinal pleura and in the chest wall are then closed. Postoperative views show the child on the thirteenth postoperative day and six months following operation. Silent, color, forty-five minutes.

HENRY R. VIETS and ROBERT S. SCHWAB, Massachusetts General Hospital, Boston:

Myasthenia Gravis (Erb-Goldflam Syndrome) 1941-1946: Motion picture depicting briefly the history of the knowledge of this disease, the treatments used prior to the instigation of neostigmine in 1934, the current treatment of the disease, and a summary of 175 cases observed since 1935 in the Myasthenia Gravis Clinic at the Massachusetts General Hospital, Boston. Silent, twelve minutes.

H. G. KOBRAK, University of Chicago, Chicago:

See the Ear Hear: A motion picture on the function of the ear, showing how a method was developed by which the acoustic vibrations of the ear could be seen and photographed for the first time. The motion picture shows the eardrum of an ear of a normal person vibrating when a sound impinges on the drum membrane. Normally, observations are restricted to the eardrum. The deeper parts of the ear were investigated on living animals and on fresh human temporal bones. The acoustic vibrations of the ossicular chain are demonstrated. The reflex contractions of the middle ear muscles during hearing are shown (animal observations and observations in patients). Diseased middle ears are demonstrated (middle ear adhesions, fluid in tympanic cavity, stapes fixation). The acoustic vibrations of the inner ear are shown (stapes footplate, round window membrane, oscillations of the intralabyrinthine fluid). The response of the ear to music is demonstrated. Silent, twelve minutes.

PAUL H. HOLINGER and ALBERT H. ANDREWS JR., University of Illinois College of Medicine, Chicago:

Diseases of the Esophagus: Motion picture giving the clinical histories, laboratory data and roentgenograms of patients with various organic diseases of the esophagus; then by means of motion pictures taken through the esophagoscope the esophagoscopic appearance of the lesions is shown. The technic of esophagoscopy is illustrated by serial roentgenograms taken as the esophagoscope is introduced, as well as by pictures of esophagoscopic procedures. The normal esophagus, lye strictures, diverticula, cardiospasm, foreign bodies and esophageal carcinoma are shown. Silent, color, thirty minutes.

JULIUS LEMPERT, Lempert Institute of Otology, New York:

Lempert Fenestra Non-Ovalis Operation for Clinical Otosclerosis: Motion picture describing the operative procedures. Silent, color, forty-five minutes.

UNITED STATES NAVY, Bureau of Medicine and Surgery, Washington, D. C.:

Psychosomatic Disorders: Sound, twenty-two minutes.

Sciatic Pain and the Intervertebral Disk: Sound, color, twenty-five minutes.

Facial Neuralgias: Sound, color, twelve minutes.

Management of Spinal Cord Injuries: Sound, color, eleven minutes.

Asiatic Schistosomiasis: Sound, color, twenty minutes.

LANTERN SLIDE DEMONSTRATION

TIMOTHY LEARY, Medical Examiner, Suffolk County, Boston:

Nature's Method of Preventing Atherosclerosis in Youth: The lesions of atherosclerosis, the important form of arteriosclerosis, arise in the arterial intima about macrophages carrying irritant cholesterol ester crystals. Deposits of these crystals in the arterial intima occur at all ages under diets rich in cholesterol. In youth these deposits disappear, in most cases without trace. The removal of the crystals is due to fibroblasts which take over the crystals and bring them into solution in fat staining material that is metabolized within the cells and disappears. The restitution of the intimal tissue is usually quite perfect. This power to remove crystalline ester deposits is lost largely in the adult period, except in the ascending aorta. Slides will be shown illustrating steps in the removal of the irritant esters. Thirty minutes.

Atlantic City Auditorium

Technical Exposition

The Technical Exhibits

this year may well bring a deep feeling of pride to the manufacturers and great satisfaction to the medical profession. In keeping with the Centennial theme, many firms are conforming to the historical keynote of "100 Years of Progress in American Medicine." This elaborate showing of new and important products evidences the progress of our medical industries which have geared themselves to the amazing advances in scientific medicine and in the maintenance of the health of our nation.

Practically every single exhibit will offer the visiting physician something of immediate interest. The pharmaceutical firms will present new drugs or new scientific information. Leading medical publishers will show new books, new editions, as well as their standard works. Producers of food will feature newest developments in nutrition. Instrument, apparatus, and supply houses will offer brand new items, improvements over the old, and new technics.

Altogether more than 282 firms are participating in the Technical Exposition, and will present their products and technics in an impressive and dramatic way, with skilled technicians and researchists in attendance.

Because the Technical Exposition, Scientific Exhibits, General Scientific Sessions, and important Section Meetings are being housed within the Atlantic City Auditorium, physicians will find it convenient to visit exhibits at any time. The Technical Exposition is really one of the practical, educational features of the Annual Session and leisured, unhurried time given to it every day will prove pleasurable, instructive and profitable.

Exhibits are open each day from 8:30 a. m. to 6 p. m., closing at 12 noon Friday, June 13. On the following pages are brief descriptive items of most of the Technical Exhibits.

THOS. R. GARDINER,
Business Manager and Director of Exhibits

Apparatus and Instruments

A. S. ALOE COMPANY
Booth H-19, H-21, H-23

The A. S. Aloe Company cordially invites you to visit booths H-19, H-21 and H-23. In addition to a complete cross section of surgical, medical, and laboratory equipment and supplies, of special interest will be a display of government surplus instruments. All of these are new, first quality instruments—currently offered at one third to one half list price.

AMERICAN CYSTOSCOPE MAKERS, INC.
Booth C-3

A special feature of this exhibit will be a panel depicting progress in the development of cystoscopic and urological equipment. On display will be a complete line of cystoscopic, endoscopic, and resection equipment also short wave medical diathermy apparatus, peritoneoscopes, thoracoscopes, proctoscopes and gastroscopes. New instruments for eye, ear, nose, and throat work and equipment for use of electrosurgical procedures will be demonstrated.

AMERICAN HOSPITAL SUPPLY CORP.
D-23 (½)

Physicians are invited to see Baxter's blood banking and plasma equipment. There will be expendable tube and needle sets demonstrated, and an ingenious method for the cleaning of as many as eight lengths of tubing or eight hypo needles at one time. In addition Aero-Klenz, the deodorant that *destroys* odors, will be on hand as well as the E & J Resuscitator and many other new items of interest.

AMERICAN MEDICAL SPECIALTIES CO., INC.
Booth E-28

A number of Amsco products will be displayed in booth E-28, among them: Findley Folding Pessaries; Infantometers; Biro Ampoule Openers; their new X-Ray View Boxes; and other specialty products for which Amsco has been known for years.

AMERICAN OPTICAL COMPANY
Booths B-1, B-2, C-1, C-2

Exhibited here are scientific and ophthalmological instruments and equipment of special interest to physicians. Among the many AO instruments shown are the recently announced Spencer hemoglobinometer, the Spencer Hb-Meter, and the new AO Renshaw Stereo-Disparator—a new orthoptic device that will surely interest practitioners. Another interesting feature is a complete display of the AO Monoplex plastic artificial eye.

AMERICAN STERILIZER COMPANY
Booth G-7

The new Overholt-Comper Thoracic Table for accommodation of patient-posturing and for bronchoscopic work under bilateral fluoroscopy will be exhibited with other "American" Surgical Operating, Obstetrical, and Fracture Tables. Of particular interest to the surgeon are the new "American" Pressure Instrument Washer-Sterilizer and the new Office Autoclave—an 8x8x16" chamber of Monel constructed, with square door and simplified semi-automatic control.

AUSTENAL LABORATORIES, INC.
Booth I-29 (E½)

"Homo Vitallium," an exhibition skeleton with many varied Vitallium appliances in place, will be displayed here. Included in the exhibit will be the complete line of Vitallium appliances which have been redesigned; bone plates and screws; hip nails and screws; hip caps; bolts; intertrochanteric appliances; radius caps; leg screws; spinal fusion plates; mandibular fracture appliances; bile duct, blood vessel and drainage tubes.

BARNETT OPTICAL LABORATORIES
Booth E-1

Clinical photographic apparatus, Kodachrome Slide Libraries, slide projectors, viewing devices, and physicians' examining lamps will be exhibited at this booth. Owners of Leica, Contax, Exakta, Perfex, and Argus cameras interested in adapting them for clinical photography are urged to bring them along for a discussion of adaptability.

RUDOLPH BEAVER
Booth J-27

Of particular interest to surgeons is the exhibit of Rudolph Beaver where the Beaver Knife and those all-bellied DeBakey knife blades are shown. In any position, these knives present a rounded, or bellied, cutting edge so useful in dissecting; in deep and special surgery including hysterectomy, cholecystectomy, mastectomy, lobectomy; and in operations of the throat, semilunar cartilage, etc.

BECTON, DICKINSON & CO.
Booths I-9, I-11

Representatives at the booth will be glad to demonstrate the use of Vacutainer equipment in a new method of obtaining blood specimens. A full line of Ace Bandages will be on display, and experts in bandaging technic will gladly demonstrate various uses of all types. A prominent feature of the display will be a chart showing the development of the hypodermic syringe during the past 100 years.

BEDFORD SURGICAL COMPANY, INC.
Booths H-5, H-7

A representative line of the Continental products will be displayed here. You won't want to miss the completely new medical equipment featured. You are invited to visit their exhibit in booths H-5 and H-7 for a helpful discussion of your office problems with competent medical service technicians.

J. BISHOP AND COMPANY
Booth H-14

The exhibit of the Medical Products Division of J. Bishop and Company Platinum Works features two innovations in hypodermic medication—the Bishop "Allaion" plastic hub needle, and the recently introduced "Tubex" syringe developed by Bishop and used by Wyeth, Inc. for their injectable penicillin preparations. Bishop's complete line of "Blue Label" needles for every hypodermic use is also displayed.

THE BURDICK CORPORATION
Booth A-11

The Burdick Corporation will exhibit their complete line of Physical Therapy equipment. This will include Short Wave Diathermy, Ultraviolet and Infra-red Lamps, Muscle Stimulator and the Rhythmic Constrictor for the treatment of Peripheral Vascular conditions. Physicians and Technicians are invited to register for a free copy of the Burdick Syllabus, a compilation of clinical material on the electrode therapy.

CAMERON SURGICAL SPECIALTY COMPANY
Booths B-14, B-16

On display here will be the new Cameron Units for Electrocoagulation, Electro-cauterization and Electro-surgery; Coagular-Sigmoidoscope; Electro-Diagnosticsets; Flexible Gastroscopes; Bronchoscopes—Esophagoscopes—Laryngoscopes; Mirrolite; Binocular Spectacle Loupe; Magniscope and other specialties.

WILMOT CASTLE COMPANY
Booths G-6, G-8

New developments in post-war surgical lighting and in sterilization will be displayed here. Lights for major operating work and spotlights for clinics and physicians' offices will be shown. The new lights will be especially worth seeing. Also newer technics for handling the cleansing and sterilization of instruments will be demonstrated. The use of oil as a sterilizing medium will receive special consideration.

THE CAYO COMPANY
Booth EP-4

In Booth EP-4, The Cayo Company will demonstrate slab sawing, which permits of cutting squarely into the bone without previous drilling. A feature of the Cayo Reciprocators is that they will cut bone but will not cut soft tissue.

WARREN E. COLLINS, INC.
Booth G-21

Booth G-21 will be headquarters for respiration apparatus—Collins Iron Lungs, Oxygen Tents, Metabolism and Vital Capacity Apparatus. Trained technicians will be in attendance to show you the latest developments in this field and to answer your questions.

DePUY MFG. COMPANY
Booth B-30

Fracture appliances made of aluminum of the more simple type for the general practitioner, the new DePuy Screw and Plate Rack for the convenience of the bone surgeon, and a pair of simple screw drivers for the orthopedic surgeon will attract interest at the DePuy booth. Representatives in attendance will be glad to discuss your fracture appliance problems.

THE DeVILBISS COMPANY
Booth J-6

Ever encouraging reports relative to spraying or the inhalation of penicillin and other antibiotics make the DeVilbiss Company exhibit in booth J-6 of pertinent interest. Atomizers, nebulizers, vaporizers, and powder blowers, for home as well as office use, will be displayed. There are types for any treatment where spray application or inhalation is to be employed.

E & J MANUFACTURING COMPANY
Booth C-12

The E & J Manufacturing Company will exhibit their large tank model resuscitators. This type of unit enables the hospital to greatly decrease the cost of operation without sacrifice of mobility. Interesting demonstrations will be given.

J. H. EMERSON COMPANY
Booth G-24

Emerson will exhibit its latest respirator development which is a dome placed over the head of the patient to keep him breathing when the respirator is open, greatly facilitating care of the patient's body. Other items displayed include a new radio for respirator patients, single and 2-way patient model resuscitators, and a novel device for the preparation of hot packs.

H. G. FISCHER & CO.
Booth H-25

Visitors to the Centennial Meeting of the American Medical Association in Atlantic City are cordially invited to visit the Fischer display booth, and to inspect the new units of Fischer apparatus which are characterized by precision design and simple, efficient operation. Fischer representatives will be present to answer questions and to demonstrate outstanding features of Fischer equipment.

THE FOREGGER CO., INC.
Booth C-30

Anesthesia is now a highly specialized art and some of the procedures entailed require highly specialized equipment. Foregger Company specializes in equipment for endotracheal and endobronchial technic as well as for general gas-oxygen ether anesthesia. New apparatus for large and small tanks and refinements in standard equipment including special apparatus for anesthetizing new born infants will interest surgeons and anesthetists.

GOMCO SURGICAL MFG. CORP.
Booth B-26

In addition to their line of physicians' and explosion proof hospital pumps, Gomco are featuring at the June meeting their new Tidal Irrigator. After several years of clinical research they have perfected a Tidal Irrigator that is simple to operate and is fool-proof. This unit will be shown for the first time at the American Medical Association Meeting.

HANOVIA CHEMICAL AND MANUFACTURING COMPANY
Space D-30

Late models of self-lighting ultraviolet quartz lamps for orificial and body irradiation, black light for diagnostic purposes, and Safe-T-Aire germicidal lamps for the destruction of air-borne bacteria will be

Exhibitors

'Abbott Lab., N. Chicago....J-9, J-11, J-13, J-15
Allergen-Proof Encasings, Cleveland, Ohio..I-1
Allison Co., W.D., Indianapolis, Ind.....P-17
Almay, Inc., New York City.....P-23
Aloe Co., A.S., St. Louis.....H-19, H-21, H-23
American Can Company, N.Y.C.....I-16
American Cystoscope Makers, Inc., N.Y.C...C-3
American Dietaids Co., Yonkers 2, N.Y...EP-16
Amer. Hosp. Sup. Corp., Evanston, Ill...½ G-25
American Institute of Baking, Chicago....D-4
American Medical Specialties Co., N.Y.C...E-28
Am.Opt.Co., Sо'bridge, Mass. B-1, B-2, C-1, C-2
American Seal-Kap Corp., L.I.C., N.Y.....B-12
American Sterilizer Co., Erie, Pa.....G-7
Amsa Company, Inc., Elkhart, Ind.....E-3
Ansco, Binghamton, N.Y.....L-8
Appleton-Century Co., D., N.Y.C.....I-22
Arlington Chemical Co., Yonkers, N.Y....B-28
Armour Laboratories, Chicago...C-9, C-11, C-13
Austenal Labs., Inc., N.Y.C.....East ½ I-29
Ayerst, McKenna & Harrison Ltd., N.Y.C...K-14
Aznoe's-Woodward Med. Bur., Chicago....A-23

Bard, Inc., C.R., N.Y.C.....H-27
Barnett Optical Labs., Chicago 26.....E-1
Barta Press, Boston, Mass.....G-27
Bauer & Black, Chicago.....K-13
Baum Co., Inc., W.A., New York City.....I-30
Bausch & Lomb, Rochester, N.Y.....C-6, C-8
Beaver, Rudolph, Waltham 54, Mass.....J-27
Beck-Lee Corp., Chicago.....D-12
Becton, Dickinson, Rutherford, N.J....I-9, I-11
Bedford Surgical Co., Inc., Brooklyn..H-5, H-7
Beeber Co., Inc., J., New York City..F-19, F-21
Beech-Nut Packing Co., Canajoharie, N.Y..B-4
Beltone Hearing Aid Co., Chicago.....L-11

featured at the Hanovia exhibit. Competent and courteous representatives will be at your disposal.

ILLE ELECTRIC CORPORATION
Booth H-10

Ille Electric Corporation will demonstrate in Booth H-10 how the care of infantile paralysis, arthritis, and other disabling conditions can be greatly improved by the use of Hydromassage Subaqua Therapy Tanks. The corporation will also display an improved Mobile Whirlpool Bath, Mobile Sitz Bath Chair, Improved Paraffin Bath and Folding Thermostatic Bed Tent.

FRANK J. JANKUSKAS
Booth EP-17

The busy physician of today needs all the mechanical help he can get to make his tasks go easier and more quickly. Outfits for measuring capillary fragility, cutaneous lymphatic flow, and blood thiocyanates, can be a material help in these circumstances. For such outfits see the Frank J. Jankuskas exhibit in Booth EP-17.

KANSAS CITY ASSEMBLAGE CO.
WP-15 (No. ½)

The Padgett-Hood Dermatome for Cutting Calibrated Skin Grafts will be demonstrated here. By the use of the Dermatome a sheet of skin of any size up to 4x7⅝ inches of uniform thickness may be removed from almost any part of the body—thigh, abdomen, chest, or back. A calibrating mechanism allows one to regulate the thickness of the skin sheet at will.

KIDDE MANUFACTURING CO., INC.
Booth H-11

This firm in its initial exhibit at an AMA Convention, will display the Kidde engineered Utero Tubal Insufflator. Its simple operation—one valve, one gage—requiring only small cartridge of Carbon Dioxide gas, will be of especial interest. Also on exhibit will be the Kidde Dry Ice Apparatus used in treatment of superficial skin lesions. This apparatus, too, because of its simplicity, is becoming increasingly popular.

CHARLES LENTZ & SONS
Booth A-9

Charles Lentz & Sons are proud to have contributed eighty-one years of their existence to the service of the medical profession—not only in America, but throughout the world. Their Exhibit will display fine American-made Stainless Steel surgical instruments.

THE LIEBEL-FLARSHEIM CO.
Booth J-29

The Liebel-Flarsheim Company cordially invites you to stop at Booth J-29 for examination and demonstration of their latest model diathermy and electrosurgical apparatus. Capable representatives will be on hand at all times to answer your questions about physical therapy and electrosurgical apparatus.

THE LINDE AIR PRODUCTS COMPANY
Booth H-6

Administration of oxygen to children will be emphasized at The Linde Air Products Company's exhibit. An oxygen piping system, which supplies oxygen directly to bedside outlets in nursery or ward; a new motion picture "Oxygen Therapy in Heart Disease"; and the Beckman Oxygen Analyzer will be featured. The Beckman Analyzer, which works on an entirely new principle, shows oxygen concentration on a scale at the push of a button.

THE MAICO CO., INC.
Booth B-29

The Maico exhibit will feature—along with the Maico Audiometer—the improved Maico Atomeer Hearing Aid. The Maico Company executives who will attend the Maico exhibit will welcome the opportunity of discussing hearing aid fitting with the doctors on the basis that an exchange of ideas may be mutually beneficial.

McINTOSH ELECTRICAL CORPORATION
Booth WP-11

In Space WP-11 will be shown several popular models of McIntosh apparatus for physical medicine. Foremost among such units is the Hogan Brevatherm Model 23890 Short-Wave Diathermy apparatus with frequency stabilization. The McIntosh 21521 Sinustat and the McIntosh 23386 Biolite Infra-Red Generator will also be shown. The McIntosh Electrical Corporation founded in 1879 is now more than sixty-eight years old.

MEDICAL QUARTZ PRODUCTS COMPANY
Booth F-9

The Medical Quartz Products Company, a division of Dullons Laboratories, will show the actual fabrication of Quartz Ultra Violet generators. With an expert operator daily making some of the more intricate devices, many of the properties of Quartz together with the skill required in its processing, may be seen. Also displayed will be the finished apparatus in which these products are used.

V. MUELLER & COMPANY
Booth C-10

One of the highlights of the V. Mueller exhibit, the new Mueller Electronic Tonometer, is expected to create unusual interest. An entirely new type of tonometer, it gives the physician dependably accurate tonometric readings, may be checked and recalibrated quickly before and after each test, if desired. The display will also include a complete line of standard and special surgical instruments.

THE NATIONAL ELECTRIC INSTRUMENT CO., INC.
Booth F-22

The National Electric Instrument Co., Inc., manufacturers of the famous "National" illuminated diagnostic and cautery equipment, has completed extensive plans for demonstrating the uses of various surgical and ophthalmic products of interest to all specialists and general practitioners. Convention visitors will also be shown visual proof of how "National" through volume sales, has continued to maintain highest quality without appreciable price increases.

ORTHOPEDIC FRAME COMPANY
Booth WP-9

The Orthopedic Frame Company, will exhibit the new Stryker Hip-nailing Board and Cassette Holder, a device to be used on any operating table by the orthopedic surgeon. This board in use maintains internal rotation of the femur and facilitates the use of the x-ray. Also displayed will be the Stryker Electric Cast Cutter and the Stryker Turning Frame.

PARAPHONE HEARING AID, INC.
Booth I-3 (W½)

The PARAVOX display will feature the Internal-Type Plastic Chassis, exclusive with PARAVOX. Tests made on this chassis required more than 200 pounds to cause a slight break. Also shown will be the miniature tubes, an "economizer" which enables the consumer to obtain more than 60 hours from one 10c "A" battery—and a giant size reproduction of the PARAVOX.

THE GEORGE P. PILLING & SON COMPANY
Booth I-10

Physicians are offered an opportunity to inspect the many nationally known and important Pilling-made items, including Lemmon apparatus for fractional or continuous spinal anesthesia, the Tocantins sternal transfusion needles, thoracic instruments developed in cooperation with prominent specialists and pneumothorax apparatus. Specialized instruments will include the BRUENING otoscope, a new ear syringe, Kennedy vaginal hysterectomy instruments—and the Kasper headlight.

THE PROMETHEUS ELECTRIC CORP.
Booth C-27

The Prometheus Electric Corporation will display its improved line of Instruments—Sterilizers, Food Conveyors, and Operating Lights. Its exhibit will feature many improvements that have been made on these items during the post-war period.

RITTER COMPANY, INC.
Booths F-32, G-31, G-32

On exhibition are the Ritter Ear, Nose and Throat Unit, complete with instruments, Ritter Motor Chair, the Ritter Shockproof X-Ray, Ritter Compressor, Ritter Rest and Relief Stool, Ritter Mobilrest Stool, Ritter Fluorescent Light, Ritter Sterilizer and Ritter Bone Surgery Engine.

SIEBRANDT MANUFACTURING COMPANY, INC.
Booth H-31

Displayed here is a new type Portable Fracture Table, which will serve for reduction and alignment of the various conditions required in fracture treatment. The exhibit's outstanding feature is a full length Casette Tunnel for holding all sizes of x-ray casseties for either pelvic, spinal, or cervical examination. Also shown are the Goodwin Bone Clamp, Clayton Transfixion Splints, and a complete line of fracture equipment.

J. SKLAR MANUFACTURING CO.
Booth H-28

The Sklar exhibit features a large display of Stainless Steel Surgical Instruments. Many of these are new instruments never shown before at any A. M. A. Convention and comprise a great number of specialized instruments, developed and produced in cooperation with leading American surgeons. On display also are exclusive models of Suction and Pressure Apparatus; Imperatori, Rolks, Moorhead, Tompkins Portable, Tom Jenkins, Lasse and Davidson Pneumothorax Apparatus.

C. M. SORENSEN CO., INC.
Booth C-32

C. M. Sorensen Co., Inc.—Will have on display at the Centennial Meeting of the American Medical Association a few of their latest units: McAuliffe Balanced Suction and Pressure Unit for Aero-Penicillin, which may be used with any pump; Ear, Nose, and Throat Treatment Outfits with accessories; Suction and Ether Apparatus.

WELCH ALLYN, INC.
Booth I-25 (E½)

New post war instruments developed by Welch Allyn, Inc. are to be presented at the Centennial meeting of the American Medical Association. A new instrument case, Montague painless Anasecope, Current Controller, Retinoscope, Head Mirror and Welch Allyn-made pliable Otoscope specula

Exhibitors

Best Foods, Inc., N.Y.C. B-9
Bilhuber-Knoll Corp., Orange, N.J. D-9
Bishop Platinum, J., Malvern, Pa. H-14
Blakiston Co., The, Philadelphia A-3
Bordon Company, N.Y.C. E-4, E-6, E-8
Borg Corp., Geo. W., Delavan, Wis. ..E-27, E-29
Breon & Co., Geo. A., Kansas City, Mo. D-10
Brewer & Co., Inc., Worcester 4, Mass. EP-5
Bristol Laboratories, Inc., N.Y.C. C-26
Brown's Medical Bureau, N.Y.C. B-19
Burdick Corp., The, Milton, Wis. A-11
Burns Cuboid Co., Santa Ana, Calif. G-28
Burroughs Wellcome, Tuckahoe, N.Y. .G-14, G-16
Business Specialties Engr. Co., Chicago W½ I-30
Cambridge Instrument Co., Inc., N.Y.C. C-17
Camel Cigarettes, N.Y.C. H-3, G-4
Cameron Surg. Specialty, Chicago B-14, B-16
Camp & Company, H.R., Jackson, Mich. G-9
Canadian Radium & Uranium, N.Y.C. F-26
Carnation Company, Milwaukee, Wis. K-7
Castle Co., Wilmot, Rochester, N.Y. ..G-6, G-8
Cayo Co., The, San Antonio, Texas EP-4
Cereal Institute, Inc., Chicago J-31
Cert. Blood Donor Serv., Jamaica, N.Y. B-10
Chicopee Sales Corp., N.Y.C. ..... West ½ E-30
Church & Dwight Co., Inc., N.Y.C. I-19
Ciba Pharmaceutical Prods., Summit, N.J. ..B-8
Clay-Adams Co., N.Y.C. H-15
Cleridge Co., Chicago EP-8
Coca-Cola Co., Atlanta, Ga. .EP-12, EP-13, EP-14
Collins, Inc., Warren E., Boston, Mass. G-21
Colwell Publishing Co., Champaign, Ill. G-2
Commercial Solvents Corp., N.Y.C. E-23
Conformal Footwear Co., St. Louis 3, Mo. ..D-11
Continental X-Ray Corp., Chicago G-3, G-5

V 1 194

will be shown for the first time. The display also features the No. 110 Ophthalmoscope and Montague Recto-Sigmoidoscope set.

WESTERN ELECTRIC COMPANY
Booth E-10

Featured at the Western Electric Booth will be a display showing the latest Western Electric Hearing Aids, Group Hearing Aids, and Diagnostic and School Type Audiometers. Representatives will be in attendance at the booth to answer questions concerning the products displayed. The Western Electric Company is the manufacturing unit of the Bell Telephone System and producers of communication and electronic equipment.

ZIMMER MANUFACTURING COMPANY
Booth F-15

This exhibit will feature a complete line of improved Fracture Equipment. Among the newer items on display will be the Godoy-Moreira Hip Fracture Set, Adjustable Intertrochanteric Plate and Nail, Rizzo Retractor, Orthopedic Hammer, Orthopedic Mallet, Martin Hip Gouge, Intramedullary Fixation Set, Webb Bolt Fixation Set, Eggers Contact Splints, Hoflow Mill, Improved Bone Clamp, Improved Walking Heel, and Conn Pneumatic Tourniquet.

Diagnostic Equipment

W. A. BAUM CO., INC.
Booth I-20

Booth I-20 will exhibit the four latest models of the Lifetime Baumanometer. Doctors interested in infant, child, and legiate bloodpressure cuffs will find a complete display. The firm will welcome the opportunity to be of every service possible in connection with your bloodpressure measurement problems.

BECK-LEE CORPORATION
Booth D-12

Years of research and experience have brought many advances in electrocardiographs. On this, the centennial year of the A. M. A., the Beck-Lee Corporation announce their new Model E Electrocardiograph. The application gained through 33 years experience with quartz string electrocardiographs has been incorporated into this new instrument. Those attending the convention will see the Model E on display.

CAMBRIDGE INSTRUMENT COMPANY, INC.
Booth C-17

At Booth C-17 will be exhibited the Cambridge "Simpli-Trol" Portable Electrocardiograph and Portable Electrocardiograph-Stethograph-Pulse Recorder, Cambridge Research *pu* Meter, the new Cambridge Electrokymograph for recording heart border motion, and the new Cambridge Plethysmograph which furnishes standardized, quantitative, and reproducible records of variations in the size of human extremities as determined by the state of fullness of the blood vessels.

THE DENVER CHEMICAL MFG. CO., INC.
Booth C-14

Galatest, for the instantaneous determination of urine sugar, and Acetone Test (Denco), for the detection of acetone in urine, will be exhibited. You are cordially invited to visit this booth for demonstration of these "spot tests" for sugar and acetone. Galatest and Acetone Test (Denco) offer advantages of accuracy, simplicity, and economy in routine urinalysis.

GASTRO-PHOTOR LABORATORIES CORP.
Booth I-28

Gastro-Photor Laboratories will feature their new 500 Model GASTRO-PHOTOR—"The Camera for photographing the interior of the Stomach." This Camera has proven its true worth as an aid in diagnosing ulcers hidden within rugal folds, or in locations inaccessible to x-ray observations. Each Camera take, provides 16 gastrophotographs. Samples of actual gastrophotographs will be available for your observation.

GOODMAN-KLEINER CO., INC.
Booth EP-21

Physicians treating marital infertility are invited to witness actual demonstrations of a new, portable apparatus for use in the diagnosis and treatment of female sterility —the Weisman GYNOGRAPH. The Gynograph, in the office, clinic or hospital, performs singly or simultaneously, carbon dioxide tubal insufflation, hysterosalpingography, or a combined pneumoperitoneum and pelvic hysterography, under constant manometric observation.

JONES METABOLISM EQUIPMENT CO.
Booth H-34

The Jones Metabolism Equipment Company will exhibit and demonstrate the new Jones Motor Basal and Super Motor Basal Metabolism Units. A staff of trained technicians will be on hand to give any help or information needed about any phase of metabolism testing.

KEYSTONE VIEW CO.
Booth A-13 (No. ½)

The Keystone View exhibit will feature several new developments in stereoscopic orthoptic equipment. Of especial interest at this time, the Keystone Stereo-Motivator, utilizing anaglyphs in a new approach to squint problems, will be demonstrated. Also a new Telebinocular with color-corrected lenses and many other improvements for vision testing and training will be shown.

LAMOTTE CHEMICAL PRODUCTS COMPANY
Booth B-27

Among the new equipment to be shown at the LaMotte booth will be a New Liver Function Test which does not require prior injection of material, a New Specific Gravity Method for serum, and a New Micro Cholesterol Unit, as well as a new development in the serodiagnosis of syphilis. Also of interest to physicians in public health work will be the New LaMotte Field Unit for inspection of foodstuffs.

SANBORN COMPANY
Booth D-11

At Booth B-11 you can see a complete demonstration of the new Sanborn direct-writing *Viso-Cardiette* and watch the actual recording of a 'cardiogram which is finished and permanent on the instant of recording. Also on display for inspection and demonstration is the *Instamatic Cardiette*, photographic type electrocardiograph. News and complete information about the new Sanborn metabolism developments are also available.

TAYLOR INSTRUMENT COMPANIES
Booth F-18

In the Tycos exhibit you will be interested in seeing an actual "Break-down Test Panel" in operation. On this panel are mounted 10 Tycos Manometers which are being pulsated automatically to prove the durability and permanent accuracy of the Aneroid-type Tycos. The display can be stopped and instruments checked by the observer

W. A. TAYLOR & COMPANY
Booth F-5

Their complete line of Comparators for colorimetric clinical chemistry will be displayed by W. A. Taylor & Company. Comparators employing simple, rapid, and accurate procedures for many tests are available. Blood sugar, NPN, Urea Nitrogen, Thiocyanate, sulfa, icterus index, hemoglobin, chlorides and many other constituents can be determined quickly and easily in the physician's office with these Comparators.

Dietetic Products

AMERICAN CAN COMPANY
Booth I-18

Convention delegates are cordially invited to visit the American Can Company's exhibit in Booth I-18 where information will be available concerning those aspects of commercially canned foods which are of particular interest to the medical profession.

AMERICAN INSTITUTE OF BAKING
Booth D-4

A century of baking will be dramatized in this booth. By comparing baking practices of a century ago with today's modern, mechanized bakery, this exhibit will depict the enormous progress made by the baking industry from the days of Sylvester Graham to today's enriched white bread made according to standards approved by the Council on Foods and Nutrition.

BEECH-NUT PACKING CO.
Booth B-4

Beech-Nut Packing Company, which will feature its twenty strained varieties of Baby Foods and fourteen of Junior Foods, invites you to visit its exhibit. Members of the nutrition staff will be on hand to answer any questions you might care to ask concerning the preparation, exact ingredients, or nutritive value of the Beech-Nut Foods.

THE BEST FOODS, INC.
Booth B-9

At their booth, The Best Foods, Inc., is exhibiting Nucoa, the wholesome nutritious vegetable margarine, which contains 15,000 units of Vitamin A to the pound. Also on exhibit will be the famous Best Foods Hellmann's Real Mayonnaise and other Best Food's products. Miss Marie Stark, Director of Consumer Education, will be in charge of the booth and will welcome questions about the products.

THE BORDEN COMPANY
Booths E-4, E-6, E-8

Items in the Borden exhibit will include not only special prescription products for infant feeding, but also foods for older children and adults. Several new powdered foods for well-rounded nutrition will be featured, in addition to Borden's widely-acclaimed soluble coffee, cheese, milk, and ice cream. Stop at Borden's for a refreshing snack. The Borden Company this year is celebrating its 90th anniversary.

CARNATION COMPANY
Booth K-7

In this exhibit you will see an attractive display on Carnation Evaporated Milk—"the milk every doctor knows." Some valuable information on its use for infant feeding, child feeding, and general diet.

Exhibitors

Corn Products Sales Co., N.Y.C.....C-29
Council on White Mineral Oil, Chicago.....E-12
Cream of Wheat Corp., Minneapolis.....H-32
Curvilite Prods., Inc., Port Chester, N.Y..WP-8
Cutter Laboratories, Berkeley, Calif..E-18, E-20

Danz, Richard & Sons, N.Y.C.....L-9
Davies, Rose & Co., Ltd, Boston, Mass....H-28
Davis Co., F. A., Philadelphia 3, Pa.....H-16
Davis & Geck, Inc., Brooklyn 1, N.Y.....EP-1
Davol Rubber Co., Providence, R.I..West ½ I-29
Day's Ideal Baby Shoe, Danvers, Mass.....C-19
Denver Chemical Mfg. Co., Inc., N.Y.C....C-14
DePuy Mfg. Co., Warsaw, Ind.....B-30
Devereux Schools, Devon, Pa.....A-6
DeVilbiss Company, Toledo 1, Ohio.....J-6
Dictograph Products Inc., N.Y.C.....J-4
Dietene Company, Minneapolis 15, Minn....E-5
Drug Products Co., Passaic, N.J.....E. ½ I-3
Duke Laboratories, Inc., Stamford, Conn..D-13
DuPont de Nem., Wilmington..D-25, D-27, D-29
Durex Products, Inc., N.Y.C.....F-27

E & J Mfg. Co., Glendale, Calif.....C-12
Eastman Kodak Co., Rochester 4, N.Y..H-6, H-8
Eaton Lab., Norwich, N.Y.....D-14, D-16
Edison, Inc., Thos. A., Bloomfield, N.J.....I-6
Edwards & Co., J., Philadelphia 7, Pa....WP-5
Emerson Co., J. H., Cambridge 40, Mass..G-24
Encyclopaedia Britannica, N.Y.C.....E. ½ L-1
Endo Products, Richmond Hill, N.Y.....H-18
Ethicon, New Brunsw., N.J..WP-12,WP-13,WP-14
Evaporated Milk Assn., Chicago.....I-14

Fischer & Co., H. G., Chicago.....H-25
Fisher-Stevens Service, N.Y.C.....S. ½ WP-15

and the method by which Carnation is generously fortified with pure Vitamin D—400 U.S.P. units per reconstituted quart—will be explained. Interesting literature will be available for distribution.

CEREAL INSTITUTE, INC.
Booth J-31

In Booth J-31 you will find an important educational message from Cereal Institute, featuring three important facts: (1) Cereals are suitable in every specialized diet; (2) Few foods can better the nutritional contribution of a serving of cereal and milk; (3) This nutritional value is provided by virtually all cereals, regardless of grain source. Complimentary copies of an authoritative booklet, "Cereals and Their Nutritional Contribution," are offered.

THE CREAM OF WHEAT CORPORATION
Booth N-32

The Cream of Wheat exhibit will be devoted to the display of both the Regular and Enriched 5 Minute CREAM OF WHEAT. They will also have for distribution, either at the booth or thru registration by the profession, interesting up-to-date literature pertaining to this product.

THE DIETENE CO.
Booth E-5

Here MERITENE Accessory Feeding and DIETENE Reducing Supplement will be on display. MERITENE, the new name for Dietene's Accessory Feeding, is a palatable high protein diet supplement. It provides over 65 grams of high quality protein per quart when mixed according to directions. DIETENE Reducing Supplement is used in low calorie diets to provide adequate quantities of vitamins, minerals and protein.

EVAPORATED MILK ASSOCIATION
Booth I-14

A free copy of "Infant Feeding with Evaporated Milk," a manual for physicians on the use of vitamin D fortified evaporated milk in infant feeding will be offered here. Discussion of the significance of vitamin D fortification in pediatrics, infant feeding formula construction, feeding of newborns and infants under special conditions, supplementary foods, complementary feedings, are included in this booklet.

GERBER PRODUCTS COMPANY
Booth H-4

Gerber's extends a cordial welcome to you to visit their booth where the new Barley Cereal for babies will be displayed. Special emphasis will be placed on the use of pediatric foods in geriatrics and in adult special diets. Appropriate service literature on infant feeding and special diets will be available. A qualified nutritionist will be among those in attendance.

CHR. HANSEN'S LABORATORY, INC.
Booth C-4

"The 'Junket' Folks," Chr. Hansen's Laboratory are displaying enlarged photos showing the action of the rennet enzyme in forming softer, finer milk curds. Literature describing dietary uses of rennet-custards in infant, child, convalescent, or post-operative feeding is available. A complimentary package of "Junket" Rennet Powder and "Junket" Rennet Tablets will be presented to physicians who register.

HAWAIIAN PINEAPPLE COMPANY
Booth WP-1

Sparkling, flavorful DOLE Pineapple Juice from Hawaii is to be served again this year at the Hawaiian Pineapple Company, Ltd. booth—No. WP-1.

H. J. HEINZ COMPANY
Booth F-7

At the H. J. Heinz booth will be an attractive presentation of interesting information on the uses of Heinz Strained and Junior Foods. The 12th edition of their popular Nutritional Chart is available upon request. While you are visiting the exhibit, be sure to register for it.

KELLOGG COMPANY
Booth C-7

The place of ready-to-eat cereals in restricted and normal diets is discussed at the Kellogg exhibit. These cereals contain valuable nutrients found in whole grains, or are fortified with extra vitamins to increase their value. Special Diet Slips for bland, high-residue, low calorie, low fat diets, as well as Diet Manuals and Nutritive Value Charts, are available.

H. W. KINNEY AND SONS, INC.
Booth I-10

H. W. Kinney and Sons, Inc. will exhibit Cartose and the Kinney line of nutritional products at Booth I-10. Representatives will be in attendance and will welcome the opportunity to talk with physicians stopping at the exhibit.

LIBBY, McNEILL & LIBBY
Booth H-17

Libby's Vitamin D₃ Fortified Homogenized Evaporated Milk and Libby's Strained and Homogenized Baby Foods are featured at the Libby exhibit. Physicians are invited to stop and discuss these two products.

M & R DIETETIC LABORATORIES, INC.
Booths D-18, D-20

M & R Dietetic Laboratories, Inc., will display Similac, a food for infants deprived either partially or entirely of breast milk. A portion of this display will be devoted to presenting the history of the development of the artificial feeding of infants. Representatives will be happy to discuss the merit and suggested application of Similac, for both the normal and special feeding cases.

MEAD JOHNSON & COMPANY
Booths K-10, K-12

The old standbys, DEXTRI-MALTOSE, OLEUM PERCOMORPHUM, and PABLUM may be seen at this one of Mead Johnson & Company's three exhibits, also their complete line of infant diet material. Booths I-13 and I-15 will feature some new phases of protein nutrition.

NATIONAL ASSOCIATION OF MARGARINE MANUFACTURERS
Booth E-3

Information on margarine, its ingredients and manufacture, and its role in sound nutrition may be found in Booth E-2. The National Association of Margarine Manufacturers invites your questions and views on the place of margarine in the diet. The Association's scientific consultants have prepared a new booklet, Fats in Therapeutic Diets. Be sure to get a copy. Other literature of value to the medical profession also is available gratis.

NATIONAL DAIRY PRODUCTS COMPANY, INC.
Booth G-20

Comparatively a newcomer in the field of infant feeding, Formulac combines the flexibility of evaporated milk in formula preparation with the protection assured by incorporating those vitamins and minerals now considered essential. Representatives will be glad to explain the properties of the product and to make it available at your hospital.

NESTLE'S MILK PRODUCTS, INC.
Booth I-26

As the latest of its many services to the medical profession, Nestlé's Milk Products, Inc. now offers to the physician a brand new booklet, "Your Baby's Formula," profusely illustrated and authoritatively written. This booklet is designed to give complete and accurate instructions to the mother on how to prepare baby's formula. The formula itself is all that needs to be supplied by the doctor.

PET MILK SALES CORP.
Booths F-1, F-2, G-1

An actual working model of a milk condensing plant in miniature will be displayed here. This exhibit offers an opportunity to obtain information about the production of Pet Milk, its use in infant feeding, and the time-saving Pet Milk services available to physicians. Miniature Pet Milk cans will be given to the physicians who visit the Pet Milk Booth.

POSTUM (GENERAL FOODS CORP.)
Booth EP-3

General Foods will serve Postum Milk Shake. This beverage is especially attractive to youngsters not only for its own delicious flavor, but it provides a more palatable way of serving milk to children who resist milk. Hot Postum is also an excellent beverage for adults who cannot drink coffee because of nervousness or digestive disorders.

SANKA (GENERAL FOOD CORP.)
Booth E-32

General Foods will serve caffein-free Instant Sanka Coffee. All doctors will be interested not only for themselves but for patients, because of true coffee flavor and convenience. It can be prepared in an *instant* at the office or home any hour of the day or night—a real cup of coffee without caffein effect.

SWIFT & COMPANY
Booth I-7

A new all-meat baby food, Swift's Meats for Babies (Strained) and Swift's Meats for Juniors (Diced) are being exhibited here. These high protein, bodybuilding foods which are available in six varieties—beef, lamb, veal, pork, heart, and liver—are also gaining rapid acceptance in special adult diet therapy. Representatives will be pleased to have you taste and examine these new products.

Medical Books

AMERICAN MEDICAL ASSN. (HYGEIA)
Booth EP-9

In the HYGEIA booth, you will find a pictorial representation of editorial contributors, the processes of editing, the methods used for screening and approving advertising and the various types of readers who benefit from this health magazine. Also presented is a series of sequence lighted color transparencies showing how HYGEIA's health information is used by professional, educational, and family groups.

D-APPLETON—CENTURY CO., INC.
Booth I-22

Visiting physicians are cordially invited to stop at the Appleton-Century exhibit and examine at their leisure the new books

Exhibitors

Flint, Eaton & Co., Decatur, Ill.....E-26
Foley Mfg. Co., Minneapolis 13, Minn.....B-24
Foregger Co., Inc., New York City.....C-30

Gastro-Photor Labs. Corp., N.Y.C.....I-28
General Elec. Co. (Lamp Div.), Cleveland D-22
Gen. Elec. X-Ray, Chic..D-17, D-19, D-21, D-23
General Foods Corp., N.Y.C.....E-32, EP-3
General Hospital Supply, N.Y.C.....EP-19
Gerber Products Co., Fremont, Mich.....H-4
Gomco Surgical Mfg. Co., Buffalo, N.Y.....B-26
Goodman-Kleiner Co., Inc., N.Y.C.....EP-14
Gradwohl Laboratories, St. Louis 3, Mo.....K-3
Grune & Stratton, Inc., N.Y.C.....A-4

Hamilton Mfg. Co., Two Rivers, Wis...L-2, L-4
Hanger, J. E., Co., Washington, D. C.....L-7
Hanovia Chemical & Mfg., Newark, N.J.....D-30
Hansen's Lab., Chr., Little Falls, N.Y.....C-4
Harrower Laboratory, Glendale 5, Calif.....G-25
Hawaiian Pineapple Co., San Francisco..WP-1
Heinz Company, H. J., Pittsburgh, Pa.....F-7
Hoeber, Inc., Paul B., N.Y.C.....A-26
Hoffmann-La Roche, Inc., Nutley, N.J.....C-15
Holland-Rantos Co., Inc., New York City..C-23
Hollister-Stier Laboratories, Spokane.....E-14
Hospital Liquids, Chicago.....E ½ I-30
Hudnut, Richard, N.Y.C.....D-6, D-8
Hygeia Nursing Bottle Co., Inc., Buffalo...G-12
Hynson, Westcott & Dunning, Baltimore...D-26

Ille Electric Corp., Long Island City.....H-10
Interchemical Corp., Union, N. J.....L-3
International Vitamin Corp., New York....C-24
Iodine Educational Bureau, Inc., N. Y....G-10
Jankushas, Frank J., Philadelphia.....EP-17

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on internal medicine, antibiotic therapy, surgery, and operative technic. The Appleton-Century representatives will also be glad to supply advance information on several other new titles in preparation for early publication.

THE BARTA PRESS
Booth G-27

Illuminated, colored enlargements of anatomical and schematic illustrations, and of kodachrome photographs feature the display of The Barta Press, Medical Division. Subjects range from the eye fundus to proctoscopic studies of internal hemorrhoids. Treatises, brochures, charts, booklets, folders, and other forms of printed literature produced for ethical medical advertisers, are also shown.

THE BLAKISTON COMPANY
Booth A-3

The unique display of new books by Blakiston will include the official American Medical Association's 1947 edition of "Standard Nomenclature of Disease and Standard Nomenclature of Operations" now published by Blakiston; Dyke's "Recent Advances in Clinical Pathology"; Merritt, Mettler and Putnam's "Fundamentals of Clinical Neurology"; Dr. Alexander Joe's "The Acute Infectious Fevers"; Alexander Fleming's "Penicillin, Its Practical Application"; and many others.

COLWELL PUBLISHING CO.
Booth G-2

Physicians and guests interested in income and expense records, or standard forms for patients' histories and accounts, may study "The DAILY LOG for Physicians, and discuss their particular problems. DAILY LOG users will find the cowhide flat-opening ring binder available again for the first time in five years.

THE COOPERATIVE MEDICAL ADVERTISING BUREAU
Booth EP-11

This exhibit will have on display copies of the 35 State Medical Journals, members of the Bureau, all of which follow AMA standards in acceptance of advertising. Service as rendered in behalf of the state medical associations will be outlined. Prospective advertisers may secure sample copies, details, rates. Ask for booklet, "Advertising Service."

F. A. DAVIS COMPANY
Booth H-16

Of interest to all physicians will be the "Cyclopedia of Medicine, Surgery and Specialties" edited by Dr. George Morris Piersol and Dr. Edward L. Bortz. In addition to their standard line of texts, F. A. Davis plan to display the new Behrend "Diseases of the Gall Bladder"; Buch "Arthritis"; Greenbaum "Dermatology"; Judd "Diseases of the Chest"; Mallinak "Rhinoplasty"; May "Reconstructive Surgery"; and Troncoso "Gonioscopy."

GRUNE & STRATTON, INC.
Booth A-4

New books on display by G & S are Schindler's "Gastritis," Mandl's "Paravertebral Block," Fradkin's "Diarrheal Diseases," Rubinstein and Davis' "Neuroanatomical Atlas," and Behrman's "Dermatologic Clues." In addition to outstanding and practical monographs and reference works, the new PROGRESS volumes, Meigs and Sturgis' "Progress in Gynecology" and Speigel's "Progress in Neurology and Psychiatry" (2nd volume, 1947) are shown. In the periodical field, two monthly Abstracts have been added.

PAUL B. HOEBER, INC.
Booth A-20

Among the new books to be on display by Paul B. Hoeber, Inc., Medical Book Department of Harper and Brothers, are Mengert's "Postgraduate Obstetrics," Elman's "Parenteral Alimentation in Surgery," and Kardiner's "War Stress and Neurotic Illness." Advance proofs of New Editions of Gesell's "Developmental Diagnosis" and Bierman's "Physician Medicine in General Practice" and a new book, Beach's "Hormones and Behavior" will be available for your perusal.

LEA & FEBIGER
Booth A-18

Lea & Febiger will exhibit both new works and new editions of standard books. They will include Holmes & Robbins' "Roentgen Interpretation"; Schwartz, Tulipan & Peck's "Occupational Diseases of the Skin"; Stimson's "Common Contagious Diseases"; Bell's "Pathology"; Soffer's "Diseases of the Adrenals"; Joslin's "Diabetes Mellitus"; Cushny's "Pharmacology & Therapeutics"; Lewin's "Foot and Ankle"; Ballenger's "Nose, Throat and Ear"; Wintrobe's "Hematology."

J. B. LIPPINCOTT COMPANY
Booths A-26, A-32, A-34

J. B. Lippincott Company, Philadelphia, Montreal, London, is pleased to present at this 100th Anniversary celebration of the American Medical Association, a brilliant display of new books and new editions in the field of medicine and surgery, including items especially prepared for this Centenary meeting.

THE MACMILLAN COMPANY
Booth B-25

Anticipating the *second* hundred years of medical progress, Macmillan will present publications of interest to both the teacher and the practitioner of modern medicine. Among those books of current and future interest will be: Lewis—"Diseases of the Heart," 4th edition; Levine— "Psychotherapy in Medical Practice"; and the forthcoming Riseman—"P-Q-R-S-T, A Guide to Electrocardiogram Interpretation"; Walter —"Aseptic Treatment of Wounds"; Goldwater—"On Hospitals" and others.

THE C. V. MOSBY COMPANY
Booths J-21 and J-23

A wealth of new medical literature will be shown by Mosby this year. New titles will include Clendening-Hashinger "Methods of Diagnosis," Treiger "Atlas of Cardiovascular Diseases," Ackerman-Regalo "Cancer," Rubin "Uterotubal Insufflation," Wiener "Skin Manifestations of Internal Disorders," Sadler "Mental Mischief and Emotional Conflicts," and Weinmann-Sicher "Bone and Bones." For something new and different in surgery, inquire about the forthcoming 9-volume "British Surgical Technic."

THOMAS NELSON & SONS
Booth I-21

Thomas Nelson & Sons will exhibit their Medical Books in a convenient manner. Each set of books will be encased in a modern, natural-oak bookcase. These bookcases will rest upon a wide jet-black reading ledge which is illuminated by indirect fluorescent lighting. This practical exhibit will permit easy examination and handling of the loose-leaf volumes.

OXFORD UNIVERSITY PRESS, NEW YORK, INC.
Booth C-28

The Oxford University Press extends a cordial invitation to physicians to visit booth C-28 where all Oxford publications along with the following new books will be on display; Jorpes, Heparin; Moviti, Jaundice; Jackson & Parker, Hodgkin's Disease; Wolff, Headache; Pack & Twombly, Symposium on Endocrinology; Duncum, Anesthesia; Peel, Diseases of the Heart; Hinshelwood, Chemical Kinetics of Bacterial Cell.

W. F. PRIOR, INC.
Booth C-16

When Prior launched a plan in 1918 to publish medical reference books that could be kept forever up-to-date it seemed too good to be true. But the test of time has proved their ideal has been achieved and has made them thousands of friends among doctors. You are cordially invited to visit this booth to express comments and suggestions for future publications.

W. B. SAUNDERS COMPANY
Booths A-12, A-14, A-16

Saunders—the publishers of the Centenary Volume giving the History of the American Medical Association—will display in a wall panel the progress of the making of this book from manuscript to bound copy. This unusually attractive exhibit will also include new books and interesting new editions, among them: Hyman's 5-volume "Integrated Practice of Medicine"; Rubin's "Diseases of the Chest and X-rays"; Cooke's "Allergy"; Spies' "Rehabilitation through Nutrition"; Bockus' "Gastroenterology."

SURGERY, GYNECOLOGY AND OBSTETRICS
Booth D-31

An interesting exhibit, portraying the character and quality of an acknowledged leader in surgical journals, is depicted at Booth D-31. Superior printing, beautiful illustrations, and high editorial standards are graphically portrayed through "Translites" in this exhibit.

CHARLES C THOMAS, PUBLISHER
Booth B-17

Located near the main entrance, the feature of Charles C Thomas Publisher's exhibit will be forty-two new titles, editions, and printings published since the last meeting. Of particular interest will be the announcement of two new journals: "The Journal of the Neurological Sciences" and "Pediatrics." A unique innovation in medical publications, the *AMERICAN LECTURE SERIES* will be displayed for the first time.

UNIVERSITY OF CHICAGO PRESS
Booth K-5

The exhibiting of Books from University Presses is an outgrowth of the Association of American University Presses. Each press represented is a separate publishing company devoted to the production of important technical and scholarly works which might otherwise go unpublished, as well as general books of vital interest. Because of their common goals, and because some are too small to sponsor exhibits alone, these presses have combined to present their books in a single display.

THE WILLIAMS & WILKINS COMPANY
Booth B-15

The Williams & Wilkins Company will display for the first time several new books and new editions, as well as their 20 medical journals including two new ones: "Obstetrical & Gynecological Survey," and "Plastic & Reconstructive Surgery." See also the new world-wide medical abstract service, "Excerpta Medica," covering all fields of medicine and surgery.

Exhibitors

Johnson & Johnson, New Brunswick, N.J..F-25
Jones Metabolism Equipment Co., Chicago..H-24

Kansas City Assemblage, K.C.....N. ½ WP-15
Kelley-Koett, Covington, Ky....J-16, K-15, K-16
Kellogg Company, Battle Creek, Mich.....C-7
Keystone View, Meadville, Pa.....N. ½ A-13
Kidde Mfg. Co., Inc., Bloomfield, N.J.....H-11
Kinney, H. W. & Sons, Columbus, Ind....I-10

Lakeside Laboratories, Inc.,Milwaukee..D-1, D-2
LaMotte Chem. Prod., Baltimore.....B-27
Lea & Febiger, Philadelphia.....A-18
Lederle Laboratories, Inc., N.Y.....J-10, J-12
Lents, Charles & Sons, Philadelphia.....A-9
Libby, McNeil & Libby, Chicago.....H-17
Liebel-Flarsheim Co., The, Cincinnati.....J-29
Lilly, Eli & Co., Indianapolis..G-18, G-20, G-22
Linde Air Products Co., The, New York....H-9
Lippincott, Philadelphia.....A-30, A-22, A-24
Luzier's, Inc., Kansas City, Mo.....A-30

M & R Dietetic, Columbus, Ohio....D-18, D-20
Macalaster Bicknell, Cambridge.....E. ½ E-30
Machlett Labs., Inc., Springdale, Conn.... F-4
Macmillan Company, The, New York.....B-25
Maico Company, Inc., The, Minneapolis....B-29
Mallinckrodt Chemical Works, St. Louis....A-1
Maltine Company, The, New York.....H-22
Marcelle Cosmetics, Chicago.....E-17
Mattern, F., Mfg., Co., Chicago E-19, E-21,E-23
McFedries X-Ray Company, Chicago.....I-2
McIntosh Electrical Corp., Chicago.....WP-11

THE YEAR BOOK PUBLISHERS, INC.
Booth J-8

Spies' "Experiences with Folic Acid," Potter's "Rh," "Sulzberger & Baer's "Office Immunology (Including Allergy)," Cullen's "Anesthesia in General Practice," Caffey's "Pediatric X-ray Diagnosis," Schiff's "Jaundice," and many new editions of general-practice-manuals and monographs and the 1946 YEAR BOOKS—these highlight the numerous timely, practical clinics-in-print which every physician is cordially invited to peruse in Booth J-8.

Office Furniture

W. D. ALLISON COMPANY
Booth F-17

The W. D. Allison Company's exhibit this year will be located in Booth F-17. Features of the exhibit will include a suite of "Monarch" physician's furniture; the Allison-Hines Recial Table; and the Allison-Ramsey Pediatric Table.

HAMILTON MANUFACTURING COMPANY
Booths L-2, L-4

The first booth to your left, as you enter the auditorium, is that of the Hamilton Manufacturing Company where is shown a complete Nu-Tone Walnut Suite and a complete Steeltone Suite. A special feature of the exhibit will be demonstrations of the newly designed all-purpose table. The top of this table is adjustable to any of the standard examining positions.

SHAMPAINE COMPANY
Booth C-25

Shampaine will display the Perfection Major Operating Table, completely head-end controlled and combining many new features. Also exhibited will be the renowned Martin All-purpose Table; the Steelux Physician's Office Furniture; and reception room furniture designed for use in doctors' offices. Factory trained representatives will be on duty and will be happy to demonstrate and discuss this equipment.

Pharmaceuticals

AMES COMPANY, INC.
Booth E-3

Representatives will demonstrate Clinitest, Albutest, and Hemotest—simplified tests for the detection of urine-sugar, albumin, and occult blood—at the Technical Exposition of the 100th Anniversary of the American Medical Association. They will also be glad to discuss Decholin and Decholin Sodium.

ARMOUR LABORATORIES
Booths C-9, C-11, C-13

The Armour Laboratories will present historical data and graphic sketches of important events which lead to our present understanding of thyroid function, standardization of thyroid preparations, and dependable treatment of simple colloid goiter, myxedema, cretinism, and other dysfunctions of the gland. Do not miss the scientific exhibit display (Space 71) and the motion picture "Animated Hematology."

BILHUBER-KNOLL CORP.
Booth D-9

The Bilhuber-Knoll display carries the fine medicinal chemicals Bromural—sedative and mild hypnotic; Dilaudid—analgesic and cough sedative; Metrazol—analeptic and antianoxiant; Theocalcin—diuretic and myocardial stimulant; and other dependable council-accepted products. Your discussions on the latest developments in these fine prescription chemicals will be welcomed.

GEORGE A. BREON & COMPANY
Booth D-10

The George A. Breon Company exhibit will feature a lighted fountain bubbling from a vine covered wall. Busy conventioneers will find it a comfortable retreat for a moment of relaxation.

BRISTOL LABORATORIES, INC.
Booth C-20

The Bristol Laboratories' exhibit will be devoted to the display of penicillin and pharmaceutical products. Qualified representatives will be on hand to assist the medical profession with any inquiries. Literature describing Bristol products will be available.

BURROUGHS WELLCOME & CO., INC.
Booths G-14, G-16

Burroughs Wellcome & Co., Inc., will present a series of interesting panels depicting the background and development of two of its most important products—Digoxin and Globin Insulin. A hearty invitation is extended to all to visit this exhibit.

CHURCH & DWIGHT CO., INC.
Booth I-19

Church & Dwight Co., Inc., in booth I-19 will pay tribute to the 100th Anniversary of the A. M. A. This firm with one hundred and one years of service to the medical profession was an industrial infant of 1 year of age when the A. M. A. was born in 1847; and throughout a century of growth, development, and experience, have continuously supplied the medical profession with Pure Bicarbonate of Soda.

CIBA PHARMACEUTICAL PRODUCTS INCORPORATED
Booth B-8

Ciba Pharmaceutical Products, Inc., invite physicians to visit their exhibit for the latest information on PYRIBENZAMINE, the new antihistaminic compound. Also displayed will be PRIVINE HCl, the effective, long-lasting nasal vasoconstrictor.

Representatives in attendance will be glad to answer any questions which you may have concerning these products and to furnish you with literature and samples.

COMMERCIAL SOLVENTS CORP.
Booth E-24

The modern-day penicillin armamentarium is to be featured: Crystalline Penicillin G Potassium Salt, Crystalline Penicillin G Sodium Salt, Crystalline Penicillin G Potassium in Oil and Wax, and Tablets Buffered Penicillin. Descriptive literature covering these preparations will be available, outlining the principal uses and dosages.

COUNCIL ON WHITE MINERAL OIL
Booth E-12

The doctor's home medicine chest will benefit by his souvenir from the booth of the Council on White Mineral Oil. He may take his pocket-size sample with him, or the Council will mail it to his address.

The background of the booth will highspot 8 advantages of mineral oil, with supporting quotations from well-known physicians.

CUTTER LABORATORIES
Booths E-18, E-20

Paralleling the hundredth anniversary of the A. M. A. is the historical exhibit of Cutter Laboratories, which depicts the progress made in the last century in pediatric immunology and in the utilization of human blood. Successive pages in an eight-foot book which dominates the Cutter display show significant advances against diphtheria, perfussis and tetanus; the final section is devoted to the fractionation of human blood, one of the highlights of the past decade.

DAVIES, ROSE & COMPANY, LIMITED
Booth H-28

Visit booth H-28 for the latest word on the Quinidine Sulfate situation. The availability of Quinidine Sulfate Tablets has been a perplexing problem for physicians and cardiac clinics, as the Government had to restrict the purchase of the salt and the sale of the tablets during the war because of enemy occupation of Java, which is the principal source of Cinchona Bark from which natural Quinidine is derived.

THE DRUGS PRODUCTS CO., INC.
Booth I-3 (E ½)

This year Drug Products which enters its 35th year of service to the medical profession will have on hand trained representatives to discuss the many Council-accepted products in their lines. You and your guests are cordially invited to stop in.

DUREX PRODUCTS, INCORPORATED
Booth F-27

Durex which this year celebrates its 20th anniversary will exhibit it's contraceptive products—Lactikol Jelly and Lactikol Creme, which have been developed during this period. Coupled with these are the usual type of plunger applicator and the recently developed Metri-Dose applicator, which is a new syringe type applicator for measured dosages, adjustable from 5 to 8 cc.

EATON LABORATORIES, INC.
Booths D-14, D-16

Eaton Laboratories, Inc., will exhibit several pharmaceutical preparations of interest to the physician. Furacin Soluble Dressing containing a new chemotherapeutic agent, Furacin (brand of nitrofurazone), will be displayed. This compound is a new antibacterial agent for the treatment of wound and surface infections. Clinical evaluation throughout the last two and one-half years indicates a wide field of use.

ENDO PRODUCTS, INC.
Booth H-18

In keeping with the historical significance of the A. M. A. centennial meeting, the Endo booth will depict an early American pharmacy. Endo representatives will be on hand to greet their medical acquaintances and to answer questions concerning their products. Samples of Endo council-accepted specialties—Mesopin, a selective gastrointestinal antispasmodic, and Estromone, for estrogenic therapy—will be distributed.

HOFFMANN-LA ROCHE, INC.
Booth C-15

Prostigmin has assumed a very important role in the practice of medicine and surgery today. For this reason Roche will feature it at their unusually attractive Centennial Convention booth. To their medical friends, they extend a cordial welcome to visit the

Exhibitors

McKesson Appliance Company, Toledo.....E-25
McKesson & Robbins, Inc., New York.....D-15
McNeil Laboratories, Philadelphia...E-9, E-11
Mead Johnson.....A-8, K-10, K-12, I-13, I-15
Medical Bureau, The, Chicago.....C-22
Medical Case History Bureau, New York...B-5
Medical Fabrics Inc., Paterson, N. J.....D-3
Medical Film Guild, New York..WP-7 & WP-7A
Medical Mailing Service, The, Inc.,Chicago WP-6
Medical Protective Co., The, Ft. Wayne, Ind. I-12
Medical Quartz Products Co., Los Angeles..F-3
Mennen Company, The, Newark, N. J.....I-17
Merck & Company, Rahway, N. J.....C-18, C-20
Merrell Co., The Wm. S., Cincinnati.....I-26
Meyer Company, The Wm., Chicago.....H-1
Mosby Co., C. V., St. Louis.....J-21- & J-23
Mueller, V., & Company, Chicago.....C-10
Natl. Assn. Margarine Mfrs., Washington...E-2
National Dairy Products Co., Inc., N.Y.C..G-29
National Drug Company, Philadelphia.....I-23
Natl. Electric Instrument, Elmhurst, N.Y...F-22
National Institute Diaper Serv., Phila.....D-32
Natl. Live Stock and Meat Board, Chicago..I-5
Nelson, Thomas & Sons, New York.....I-21
Nestle's Milk Products, Inc., New York.....I-24
New York Medical Exchange, New York..B-12
North American Philips, N.Y.C...F-28 and F-30
Novocol Chemical, Brooklyn.....upper ½ F-29
Obrig Laboratories, Inc., New York.....K-2
Ohio Chemical & Mfg. Co., The, New York..I-4
Oldsmobile Div., Gen. Mot. Corp., Lansing.LO-1

Roche booth where competent members of their convention staff will be in attendance to discuss Prostigmin and other specialties.

HOLLAND-RANTOS COMPANY, INC.
Booth C-23

At the Holland-Rantos Booth will be displayed the nationally known and universally used Koromex contraceptive specialties. Be sure to see the new Koromex Set Complete, which is a package combining the necessary items for complete contraceptive technic. Samples of Koromex Jelly will be available, as will be copies of the new physician's patient instruction chart.

HOLLISTER-STIER LABORATORIES
Booth E-14

100 years ago allergy was practically unknown. Today it is an important part of medical practice. A visit to the Hollister-Stier Laboratories' booth will acquaint you with what is new, and explain how much a laboratory specializing exclusively in the field of allergy can aid you in your practice.

HYNSON, WESTCOTT & DUNNING, INC.
Booth D-26

Hynson, Westcott & Dunning, Inc., will feature their pharmaceutical specialties. There will also be a display of diagnostic apparatus and ampule solutions which have been developed in cooperation with physicians. Representatives of the company will be present to demonstrate and to provide information regarding these products. Literature will be available to physicians who are not already familiar with products exhibited.

INTERCHEMICAL CORPORATION
Booth L-3

The Biochemical Division of Interchemical Corporation will display AMINO ACIDS—I. C. Representatives of the scientific staff will be available at Booth L-3 for discussion of laboratory and clinical amino acid research. Physicians are cordially invited to meet them and exchange views on the potential usage of amino acids in nutrition.

INTERNATIONAL VITAMIN CORPORATION
Booth C-24

At the I. V. C. Booth there will be a full array of Council-accepted vitamin products. An especially interesting Vitamin "A" configuration will be shown in color transparency. Well-trained representatives and an M.D. will be in attendance at all times to describe and explain the uses of I. V. C. products.

LAKESIDE LABORATORIES, INC.
Booths D-1, D-2

The Lakeside exhibit will feature Mercuhydrin, well tolerated mercurial diuretic; Estrogens, Lakeside; and Emulsigen, emulsifying vehicle for penicillin. Representatives will be on hand to describe the applications of these medications.

LEDERLE LABORATORIES, INC.
Booths J-10, J-12

Therapy through Research will be the theme of the Lederle exhibit. This will be illustrated by the development of folic acid and its uses in the treatment of macrocytic anemias. Across the center front of this large exhibit will be a series of illustrations and photographs so arranged that physicians can most easily examine the new products of research.

ELI LILLY AND COMPANY
Booths G-18, G-20, G-22

Exhibits on diabetes and the anemias are presented to conform to the historical keynote of the Centennial meeting. These displays present a series of translite panels telling the story of diabetes and the anemias through the ages and the modern conquest of these disorders.

MALLINCKRODT CHEMICAL WORKS
Booth A-1

The Mallinckrodt Chemical Works cordially invites all members of the American Medical Association and their friends to visit Booth A-1. The representatives in attendance will be glad to answer questions concerning the chemicals on display or any problems relative to the medicinal line of chemicals as supplied by the Mallinckrodt Chemical Works.

THE MALTINE COMPANY
Booth H-22

Thromboplastin, a new product from the Research Laboratories of The Maltine Company, is featured at the Maltine exhibit. This product is an improved and standardized thromboplastin for diagnostic purposes and its use makes possible prothrombin determinations of greater accuracy. Prothrombin determinations aid in detecting an increased tendency to hemorrhage or to thrombosis.

McKESSON & ROBBINS, INC.
Booth D-15

A display of accepted vitamin products and of historical data showing development of the House of McKesson since 1833 will be featured here. Some of the modern laboratory procedures will be demonstrated.

MEAD JOHNSON & COMPANY
Booth A-8

Don't miss the outstanding display of Famous Medical Caricatures at Mead Johnson & Company's Booth A-8. "Medical caricatures show us medicine, its evolution, its discoveries, and its failures from the standpoint of the patient, medicine as seen by the sick."

MERCK & CO., INC.
Booths C-18 and C-20

The Merck exhibit will feature important developments in medical progress, including such products as Quinine, Arsenicals, Vitamins, Sulfonamides, Penicillin, and Streptomycin. Pay a visit to the Merck display—Booths C-18 and C-20. The representatives in attendance will be at your service.

THE WM. S. MERRELL COMPANY
Booth I-26

This "pioneer pharmaceutical house," closely identified with progress in prescription medicines since 1828, presents its exhibit as a salute to the A. M. A. Centennial and to the frontier "Saddle Bag Doctor" of 100 years ago. Special attention is called to several of the many contributions to medical science which the Merrell Company has made since the birth of the American Medical Association.

THE NATIONAL DRUG COMPANY
Booth I-23

Products on display at the National Drug exhibit will be their time-tested, Council-accepted biologicals, together with the newest developments of their research laboratories in both the biological and pharmaceutical fields. Of special interest will be the series of multiple antigens for simultaneous immunization. Trained representatives will be available for discussion.

NOVOCOL CHEMICAL MFG. CO., INC.
Booth F-29 (E ½)

Your visit through the exhibits would hardly be complete if you did not stop at Booth F-29. Here will be displayed the new, safe, potent local anesthetics, MONOCAINE HCl and MONOCAINE FORMATE—the latter for spinal anesthesia and caudal analgesia. There will also be a complete exhibit of the popular cartridge known as the ANESTUBE. You are cordially invited.

ORTHO PHARMACEUTICAL CORPORATION
Booths I-31, I-32

The Ortho Pharmaceutical Corporation cordially invite physicians to visit its exhibit where their complete, well-known line of conception control products will be shown. Complete information and literature will be available. Special requests will be given prompt attention.

PARKE, DAVIS & COMPANY
Booths F-9, F-11, and F-13

The 1947 Parke, Davis & Company exhibit will highlight the technical aspects of BENADRYL. Demonstrations of the fundamental uses of radioactive isotopes in medical research and their applicability to the study of the pharmacodynamic action of BENADRYL will be depicted. Photographs in color will illustrate the use of BENADRYL in urticaria, hay fever, eczema, and smooth muscle spasm associated with allergies.

THE E. L. PATCH CO.
Booth C-5

To any physician concerned with the treatment of functional constipation, The E. L. Patch booth, C-5, will hold a special attraction. On display will be the Three Types of Konditamul—Plain; with Cascara; and with Phenolphthalein. You won't want to miss this interesting exhibit.

PERM-ASEPTIC CORPORATION
Booth H-2

An exhibit of particular interest will be that of PERM-ASEPTIC, the new antifungal and antibacterial chemical developed during the war and used by many laundries. Superintendents and heads of hospitals especially will want to learn more about this colorless, odorless, preservative which gives service and protection to linens, diapers, etc. You are cordially invited to stop by and become acquainted with PERM-ASEPTIC'S many other uses.

PREMO PHARMACEUTICAL LABORATORIES
Booth K-1

Introducing a refinement in the application of penicillin in oil and wax, the modernistic exhibit of Premo Pharmaceutical Laboratories graphically underlines Premo's contemporary contributions to the administration of penicillin. Medical service representatives are in attendance to demonstrate Premo's adaptations and methods. Literature is available on Premo's latest laboratory research and developments.

RARE CHEMICALS, INC.
Booth J-25

The male hormone—testosterone propionate for parenteral use—will be the main feature of Rare's exhibit. Other products to be included are the new skin detergents, Acidolate (nonlathering liquid) and Dermolate (lathering cake); Gitalin, digitalis glycoside; and Salysal, the salicylate which requires no alkali.

WM. H. RORER, INC.
Booth I-27

This year, the exhibit of William H. Rorer, Inc., offers a display of "Rorer" Council-accepted products. These include Mannitol Hexanitrate "Rorer," vasodilatory agent widely used in cardiovascular therapy, as well as other preparations of current therapeutic interest, notably Thiouracil "Rorer," Sulfadiazine "Rorer," and Diethylstilbestrol "Rorer." Full professional data on these products will be gladly supplied by the Rorer representative.

Exhibitors

Orthopedic Frame Co., Kalamazoo, Mich..WP-9
Ortho Pharm. Corp., Raritan, N. J.....I-31, 32
Oxford University Press, New York.....C-28

Packwood Mfg. Co., G. H., St. Louis 10, Mo. WP-10
Paraphone Hearing Aid, Cleveland...W. ½ I-3
Parke, Davis, Detroit.....F-9, F-11, F-13
Patch Company, The E. L., Boston.....C-5
Peerless Labs., N.Y.C.....EP-26
Perm-Aseptic Co., Mamaroneck, N.Y.....H-2
Pet Milk Sales Corp., St. Louis...G-1, F-1, F-3
Philip Morris, N.Y.C...A-15 (Lounge), B-21, B-23
Picker X-Ray, New York.....J-3, J-5, J-7
Pilling Company, Geo. P. & Son, Phila...A-16
Pitman-Moore, Indianapolis.....J-1 and J-2
Premo Pharmaceutical Labs., N.Y.C.....K-1
Prior Company, W. F., Hagerstown, Md....C-16
Procter & Gamble Co., The, Cincinnati....J-14
Professional Equipment Co., Chicago.....E-10
Prometheus Electric Corp., New York.....C-27
Pyramid Rubber, Ravenna, Ohio.....G-26

Radium Chemical Co., Inc., New York....G-19
Radium Emanation Corp., New York.....WP-6
Rare Chemicals, Inc., Harrison, N. J.....J-25
Ritter Company, Rochester....F-32, G-31, G-32
Rorer, William H., Inc., Philadelphia.....I-27

Safety Gas Machine Co., Chicago....½ of G-23
Sandoz Chemical Works, Inc., New York...F-28
Sanborn Company, Cambridge, Mass.....B-11
Sanit-All Products Corp., Greenwich, Ohio..C-21
Saunders Co., W. B., Phila.....A-12, 14, 16

SANDOZ CHEMICAL WORKS, INC.
Booth F-26

For the non-narcotic relief of migraine, physicians will be interested in Gynergen (Ergotamine tartrate); also featured are: Digilanid, a combination of the pure crystalline Lanatosides A, B & C; Scillaren and Scillaren B, containing the cardiodiuretic principles of squill—these cardioactive glycosides are standardized gravimetrically; and Sandoptal, an effective hypnotic and sedative.

SCHERING CORPORATION
Booth I-16

In endocrinology, progress has been recorded since the time of Aristotle's empiric observations of the effects of castration. Within the past century many important scientific contributions in rapid succession have added to the history of the sex hormones. At the Schering booth is shown "The Genealogy of the Sex Hormones," the family tree, and history of the isolation and synthesis of the potent sex hormones.

SCHIEFFELIN & CO.
Booth H-13

Schieffelin Benzestrol, a non-stilbene synthetic estrogen, developed in the research laboratories of Schieffelin & Co., will be featured. A qualified staff will be in attendance to explain the advantages of this product, and to answer questions with regard to other Schieffelin specialties.

JULIUS SCHMID, INC.
Booth G-17

Visitors to the new exhibit of Julius Schmid, Inc., will see the RAMSES Prescription Packet No. 501 displayed for the first time at any convention of the American Medical Association. Recently made color photographs which established the barrier value of RAMSES Vaginal Jelly will also be shown, as will other reproductions in color of special interest to physicians.

G. D. SEARLE & CO.
Booths E-13, E-15

The Searle exhibit will display many Council-accepted products of Searle Research. Featured will be Searle Aminophyllin including Aminophyllin Suppositories, the Searle brand of Aminophyllin Suppositories which remain stable at temperatures up to 130 F., but which liquefy readily under conditions of use; Metamucil, a modern concept in the treatment of constipation; and Diodoquin, the effective amebacide.

SHARP & DOHME, INC.
Booths B-18, B-20, B-22

This year's display of Sharp & Dohme features a demonstration of the production steps involved in the manufacture of virus vaccines. The antibiotic, tyrothricin, and the sedative and hypnotic, 'Delvinal,' are featured also along with the sulfa drugs—'Sulfasuxidine' and Sulfamerazine. Capable informed representatives including members of Sharp & Dohme's research staff are present at all times.

CARROLL DUNHAM SMITH PHARMACAL COMPANY
Booth A-13 (B ½)

This exhibit will present the new drug, BISTRIMATE (Smith), which is orally effective and well tolerated in systemic bismuth therapy. Detailed information on chemical structure, bismuth excretion studies, and clinical histories, will be portrayed.

SMITH, KLINE & FRENCH LABORATORIES
Booths EP-7, EP-7A, EP-8

S. K. F.'s antique drug store, an authentic 1793 apothecary's shop—complete with botanicals and galenicals, patent medicines and nostrums—is exhibited by Smith, Kline & French Laboratories. On workbench and counter are numerous 18th century pharmacist's tools, including a tooth extractor and a bleeder. Despite its obsolete equipment, visitors will quickly note the family resemblance to the prescription department of a modern drug store.

E. R. SQUIBB & SONS
Booths F-10, F-12, F-14, F-16

Nutrition in the Sick—A series of panels depicting the daily nutritional requirements of a typical hospitalized patient, daily deficits in nutritional intake, daily protein and vitamin losses by excretion, certain pathological results of such deprivation, and suggestions for prompt restoration of nutritional balance will be dramatized in the Squibb exhibit.

FREDERICK STEARNS & COMPANY
Booths F-6, F-8

Frederick Stearns & Company Division is featuring their Parenamine (Amino Acids, Stearns) which is a mixture of amino acids derived from the acid hydrolysate of casein fortified with pure *dl*-tryptophane to the extent of 1% of the total amino acids, also Neo-Synephrine Hydrochloride products, Appetin Appie Powder, and Gastric Mucin. The professional staff will be in attendance to discuss these products.

MARVIN R. THOMPSON, INC.
Booth EP-15

Marvin R. Thompson, Inc., in accordance with their established policy of rendering useful "Service to Medicine" will provide the latest news bulletins as they come off the direct associated press wire in the comfortable MRT lounge, located in the far eastern section of the Technical Exhibit. A. M. A. members and guests are cordially invited to drop by for a rest, a smoke, and the latest news.

U. S. VITAMIN CORPORATION
Booth L-6

Highlighting this exhibit will be enlarged color photographs of common signs of nutritional deficiency including Bitot's spots, follicular hyperkeratosis, beriberi heart, pitted edema, glossitis, cheilosis, pellagrous dermatitis, gingivitis, rickets, pyridoxine anemia and others. Complimentary copies of the illustrated brochures "Diagnosing Vitamin Deficiencies," "Vitamin Manual for Physicians," and other educational material will be distributed.

THE UPJOHN COMPANY
Booths J-17, J-19

The Upjohn Company exhibit outlines in a diagrammatical and unusual manner the mechanism of blood clotting. It deals with the use of Thrombin as a sort of biologic cement, the use of Gelfoam (a tissue absorbable sponge) as a hemostatic agent, and the clinical use of the natural anticoagulant, Heparin.

VARICK PHARMACAL CO., INC.
Booth F-24

Varick Pharmacal Company, manufacturers of Digitaline Nativelle, plans an interesting and informative exhibit at the forthcoming meeting. Enlarged full-color kodachromes of many gross cardiac specimens and photomicrographs of cardiac pathology will be displayed, as well as interesting electrocardiograms. Arrangements are also being made to reproduce phonographically heart sounds of various valvular lesions.

WALKER VITAMIN PRODUCTS, INC.
Booth B-7

This firm is using a new modern exhibit which enables it to effectively present its line of Council-accepted Vitamin Tablets, Capsules, and Injectable Solutions. Experienced representatives in attendance will be qualified to discuss all phases of vitamin therapy.

WALLACE LABORATORIES, INC.
Booth H-12

New treatment for acne vulgaris, Intraderm Sulfur Skin Penetrant Solution will be presented by Wallace Laboratories, Inc. This new treatment for acne vulgaris incorporates the intraderm principle of follicle penetration which will be demonstrated at the Wallace exhibit.

WALLACE & TIERNAN PRODUCTS, INC.
Booth B-3

W & T is exhibiting AZOCHLORAMID, a stable and highly bactericidal chloramine for wet dressings, hot soaks and irrigations; MONOMESTROL, a synthetic estrogen, orally effective and comfortably tolerated by the patient; and DESENEX, a potent, yet non-irritating fungicide. You are cordially invited to visit our exhibit. We will welcome inquiries about our products.

WILLIAM R. WARNER & CO., INC.
Booth D-24

In view of medical interest in histamine and antihistaminics, the research laboratories of William R. Warner & Co., Inc., have been investigating their action and effects. A series of photographs and charts have been prepared which depict the physiologic effects of these preparations on the animal body. The presentation includes studies on the alimentary tract, circulatory and respiratory systems.

THE WARREN-TEED PRODUCTS COMPANY
Booth E-22

"Warren-Teed" in eight inch, red Lucite letters tops a five unit display in gleaming white, trimmed in red. The entire display is illuminated by indirect lighting and two of the units contain transluite pictures of scenes in the Warren-Teed laboratories and manufacturing departments. Council-accepted products will be on display.

WHITE LABORATORIES, INC.
Booths G-11, G-13, G-15, L-10, L-12, L-14

White Laboratories, Inc., presents ethically promoted pharmaceutical specialties for your consideration and discussion. White's Cod Liver Oil Concentrate Products and other Council-accepted vitamin products are on display. This company pioneered in vitamin research, and the same progressive scientific spirit has been maintained in the manufacture of all White's products. Your visit to White's Exhibit will meet a cordial welcome.

WINTHROP CHEMICAL COMPANY, INC.
Booths A-17, A-32, B-31, B-32

Winthrop's main display consists of colored models by Dr. Justus F. Mueller showing causative agents of all principal tropical diseases. Of particular interest are models of various forms of malarial parasites. The complete malarial cycle is reproduced, including the recently discovered exoerythrocytic (tissue) phase of the cycle. A part of the exhibit devoted to anesthesia and continuous caudal analgesia is illustrated by full color transparencies of paintings by Leon Schlossberg. Complimentary prints of "Anesthesia 100 Years Ago" are offered to physicians.

Exhibitors

Schering Corporation, Bloomfield, N. J.....I-16
Schieffelin & Co., New York.....H-13
Schmid, Julius, Inc., New York.....G-17
Searle & Co., G. D., Chicago....E-13, and E-15
Shampaine Company, St. Louis.....C-25
Sharp & Dohme, Inc., Phila..B-18, B-20, B-22
Shay Medical Agency, Chicago 3.....L-5
Shellmar Prods., Mt. Vernon....W. ½ of L-1
Siebrandt Mfg. Co., Kansas City, Mo.....H-31
Skiar, J., Mfg. Co., Long Island City...H-26
Smith, Carroll Dunham, New Brunsw.....A-13
Smith, Kline & French, Phila..EP-7, EP-7A, EP-8
Sorensen, C. M., Company, Inc., New York..C-32
Spencer, Inc., New Haven, Conn.....E-7
Spindler & Sauppe, Los Angeles....W. ½ F-29
Spirella, The Co., Inc., Niagara Falls, N.Y.H-30
Squibb, E. R., N.Y.C....F-10, F-12, F-14, F-16
Standard X-Ray, Chicago.....J-4
Stearns, Frederick, Detroit.....F-6, F-8
Surgical Publishing Company, Chicago....D-31
Surgitube Prods., Bronx, N.Y.....W. ½ I-25
Swift & Company, Chicago.....I-7
Tampax Inc., New York.....I-8
Taylor Instrument Co., Rochester, N.Y.....F-18
Taylor, W. A., & Company, Baltimore....F-5
Technicon Company, The, New York..K-9 & K-11
Thomas, Charles C, Springfield, Ill.....B-17
Thompson, Marvin R., Stamford, Conn..EP-15
Toldoy Company, The, Fort Wayne, Ind....A-2
Tower Company Inc., The, Seattle....D-5, D-7
U. M. A., Inc., New York.....D-28
U. S. Vitamin Corp., N.Y.C.....L-6

Surgical Supplies

BAUER & BLACK
Booth K-13

This exhibit will feature the use of KERLIX cloth, an interesting new gauze which contains a permanent crinkle and has softness, fluffiness, and resiliency not possible with regular gauze. The company will show how its mild elasticity makes it particularly suitable for head, knee, elbow, stump and compression dressings.

DAVIS & GECK, INC.
Booth EP-1

Davis & Geck, Inc., manufacturers of sterile surgical sutures will, through the facilities of the D & G Surgical Film Library conduct a program of surgical motion pictures. The Library, founded in 1928, presented its first showing at the A. M. A. Convention in Atlantic City in 1929. It now includes over three hundred subjects including films on nearly every phase of surgical procedure.

DAVOL RUBBER COMPANY
Booth 129 (W ½)

Davol Rubber Company will display samples of many of the surgical and essential health items which presently are being supplied. They will display and demonstrate also the Constant Traction Dressing, the new type suture that has been favorably received by the profession.

ETHICON SUTURE LABORATORIES
Booths WP-12, WP-13, WP-14

Ethicon Suture Laboratories will show the motion picture "Anomalies of the Bile Ducts and Blood Vessels; Strictures of the Common Duct"—Warren H. Coles, M.D., Chicago, Professor of Surgery and Head of the Department, University of Illinois Medical College, and Associates—produced by the American College of Surgeons.

MEDICAL FABRICS, INC.
Booth D-3

Medical Fabrics, Inc., exhibiting at Booth D-3 are showing their combination bandage consisting of Pressoplast, the Elastic Adhesive Bandage, and Contura, suggested for skin protection prior to the application of Elastic Adhesive. You are cordially invited to visit this exhibit.

SURGITUBE PRODUCTS CORP.
Booth 1-25 (W ½)

New kodachrome transparencies showing SURGITUBE in 12 various positions will highlight this exhibit. SURGITUBE, a new seamless gauze fabric in tubular form, makes a neat, comfortable, flexible bandage; and because of its ease of application and removal, it may be economically used on all extremities with a great saving of time.

Special Apparel

S. H. CAMP & COMPANY
Booth G-9

A series of illuminated transparencies depicting anatomical conditions before and after application of Camp scientific supports and educational material available through the Samuel Higby Camp Institute for Better Posture will be displayed. Experts in attendance will answer questions pertaining to the scientific application of anatomical supports and advise regarding the availability of them in Authorized Service departments of stores throughout the country.

CONFORMAL SHOE COMPANY
Booth D-11

The Conformal Shoe Co., a division of the International Shoe Company, St. Louis, is sponsoring a special exhibit. The display illustrates how the Conformal shoe achieves snug custom fit and balanced support for each individual foot with its special patented plastic insole.

J. EDWARDS & COMPANY
Booth WP-5

You won't want to miss the very interesting display of children's shoes by J. Edwards & Company. The exhibit will show shoes for children of all ages from babies to "teen agers" and will include pre-walking, first steps, dress, and school shoes. Edwards' shoes for children have been made in Philadelphia since 1900. A special group of shoes for weak ankles, pronations, etc., will also be on display.

SPENCER, INCORPORATED
Booth E-7

The Spencerflex for Men—a new functional support design—is of especial interest; like all Spencer Supports, it is individually designed. Also on display are Spencer Breast Forms, prescribed following mastectomy to improve the patient's appearance and mental attitude. Spencer Supports used by physicians to aid sacroiliac disturbances, visceroptosis, hernia, and many other conditions are also featured.

THE SPIRELLA COMPANY, INC.
Booth H-30

Spirella Foundation Garments present an entirely new and different method of corsetry designing. The unique Spirella method includes the use of exclusive Modeling Garments which are adjusted to the patient to give just the degree of support desired. Then measurements are taken of the supported figure and the patient's Spirella is individually made to exact specifications.

THE VANTA COMPANY
Booth WP-16

VANTA garments for infants offer layette items without pins or buttons and for toddlers, Self-Help garments, all of which will be exhibited in Booth WP-16. Originator oth the Tie Vest, Sun Suit, K-band, Baby Bens, bone and other important features, VANTA will show No-Fas-Ning shirts and the latest developments in proper clothing.

Toilet Preparations

ALMAY, INC.
Booth F-23

Almay will present at Booth F-23 their new "Super-Milled" Face Powder in a feast of exciting new shades. By the elimination of aniline colors, Almay has succeeded in lowering to an irreducible minimum the sensitizing index of this new and lovelier-textured Face Powder (available Unscented or Perfumed). Visit the Almay Booth for other interesting developments.

DUKE LABORATORIES, INC.
Booth D-13

Duke Laboratories, Inc., will have on display Elastoplast, cotton-woven, adhesive surfaced, stretchable bandage; Mediplast compresses (sterilized and individually wrapped); Nivea Creme; Nivea Skin Oil; and Basis Soap—The Prescribers' Cosmetics.

LUZIERS, INC.
Booth A-30

Luzier's Fine Cosmetics and Perfumes, as advertised in publications of the American Medical Association, will be on exhibit in Booth A-30. The Luzier formulas are selected to suit individual cosmetic requirements and preferences and may be modified to suit allergies. Luzier officials will be in attendance to explain in detail the nature of this service.

MARCELLE COSMETICS, INC.
Booth E-17

The Marcelle booth will feature hypoallergenic cosmetics, formulated scientifically for those with sensitive skin and for the allergic person. Mr. Philip L. Blazer, President, and members of the organization, welcome discussions with physicians on the cosmetic needs of the medical profession. Available to allergists, dermatologists, and all physicians interested in allergy, are formularies, brochures and cosmetics.

G. H. PACKWOOD MFG. CO.
Booth WP-10

Paxlanosav Heavy Duty Granulated Skin Cleanser for industrial use will be presented in booth WP-10. Here it will be shown how this Heavy Duty cleanser has been a successful factor in helping to protect worker's hands against infections nad irritations that impair efficiency. Its bounteous lather, exceptional cleansing speed, economical bulk, and other desirable qualities will be of particular interest.

THE PROCTER & GAMBLE COMPANY
Booth J-14

Proctor & Gamble offers the first four of a series of time-saving leaflet pads for doctors:—"Instructions for Routine Care of Acne"; "Instructions for Bathing a Patient in Bed"; "Instructions for Bathing Your Baby"; and "The Hygiene of Pregnancy." Additional pads designed to save doctors' time in answering patient's questions on routine home care and other service material will be displayed.

WESTWOOD PHARMACAL CORP.
Booth H-20

Lowila Liquid and Lowila Cake, soapless detergents, are exhibited here. If your Atlantic City hotel offers you ocean water in your room, you might want to try a surprisingly pleasurable bubble bath with LOWILA LIQUID. Both the cake and liquid lather profusely in salt water. While LOWILA preparations are suggested for the soap sensitive, we believe you will enjoy this unique application.

X-Ray & Radium

X-RAY & RADIUM
ANSCO
Booth L-8

The Ansco exhibit will feature color transparencies and prints of medical and general photographic subjects, also radiographs made with screen and non-screen types of X-ray film. The medical transparencies and prints will include gross specimens as well as photomicrographs. A precision-built semi-automatic 12—2¼x2¼ squire format Beflex camera equipped with f3.5 coated lens will also be on display.

(Continued ond advertising page 106)

Exhibitors

Universal Products Corp., Norristown, Pa..WP-3
University of Chicago Press, The, Chicago..K-5
Upjohn, Kalamazoo, Mich.....J-17 and J-19
Vanta Company, The, Newton, Mass.....WP-16
Varick Pharmacal Co., Inc., New York....P-24
Vernon-Benshoff, Pittsburgh.....S. ½ EP-18

Walker Vitamin Prods., Mt. Vernon, N.Y...D-7
Wallace Labs., New Bruns., N.J.....H-13
Wallace & Tiernan, Belleville, N.J.....D-3
Walton Laboratories, Inc., Irvington, N.J...G-30
Wander Company, The, Chicago.....H-29
Warner, William R., New York.....D-24
Warren-Teed Prods. Co., Columbus, Ohio..E-22
Wee Modern Furn., Independence, Mo....EP-18
Welch Allyn, Inc., Auburn, N.Y..East ½ of I-25
Western Electric Co., N.Y.C.....E-16
Westinghouse Electric, Pittsburgh....A-5, A-7
Westwood Pharmacal Corp., Buffalo.....H-20
White Labs., Newark..G-11, 13, 15, L-10, 12, 14
Williams & Wilkins Co., The, Baltimore...B-15
Winthrop Chm., N.Y.C..A-17, A-32, B-31 & B-32
Wisconsin Alum. Res. Found., N.Y.C.....B-6
Wolf X-Ray Prods., Inc., N.Y.C..WP-17, WP-18
Wyeth, Inc., Philadelphia.....K-4, K-6, K-8

Year Book Publishers Inc., Chicago.....J-8

Zimmer Mfg. Co., Warsaw, Ind.....F-15

ORGANIZATION SECTION

Washington Letter

(From a Special Correspondent)

April 26, 1947.

President Lauds Pharmacists for Contribution to Public Health

In a letter to the American Pharmaceutical Association President Truman congratulated the pharmacists of the United States on their contribution to the health of the American people. His message was a prelude to the twenty-first National Pharmacy Week, April 20 to 26. He expressed confidence that the pharmacists would "continue to extend their efforts to improve public health." He pointed out that "many of our citizens go to the neighborhood pharmacy for help in time of sickness. The fact that pharmacists there employed are in a position to advise patrons where to go for diagnosis and treatment adds materially to the service available to the sick." This year National Pharmacy Week will be dedicated to public education on control of cancer in a cooperative program with the American Cancer Society.

Favorable Reports on Improved Artificial Hand

Favorable reports have been issued on a new artificial hand, with a mechanism perfected at the Naval Ordnance Laboratory at White Oak, Md., and a "cosmetic glove" almost indistinguishable from human flesh, developed at the Naval Dental School at Bethesda. The new hand was created after Lieut. Comdr. Russell G. DeLany, chief of plastics division, Naval Ordnance Laboratory, became a patient at Bethesda Naval Hospital. He asked to see the "glove" and found it "excellent," but when the old bulky artificial hand was shown to him he decided to send it to the laboratory for examination. Now there are ten of the experimental hands in use. The "glove" is attributed largely to work of Lieut. Comdr. Herbert J. Towle.

Army Nurse Chief to Retire

Col. Florence A. Blanchfield will retire May 21 as superintendent of the Army Nurse Corps after forty-one years of service in nursing. She was credited with helping to secure full military rank for nurses. Colonel Blanchfield had been with the Army Nurse Corps for twenty-nine years and in the Surgeon General's office since 1935. The American Red Cross has presented her with its national award for "exceptional service in behalf of humanity."

Public Health Service Training for Filipinos

Dr. Thomas Parran, Surgeon General of the U. S. Public Health Service, has awarded to 25 Philippine citizens public health fellowships which entitle them to a year's study of public health administration and methods in the United States. The fellowships are offered under the Philippine Rehabilitation Act of 1945.

Official Notes

TELEVISION BROADCASTS

The following programs have been arranged by the Bureau of Health Education for presentation over television station WBKB, Chicago, on the indicated dates:

May 22. Centennial of A. M. A.: Endocrinology. Drs. Willard O. Thompson and Austin Smith.

June 5. Fitness in Girls and Women. Drs. Dean F. Smiley and Fred V. Hein.

June 19. Centennial of A. M. A.: Orthopedic Surgery. Dr. Fremont A. Chandler.

Health education telecasts will be discontinued for the remainder of the summer season. Notice will be given in these columns on their resumption.

Medical Legislation

STATE LEGISLATION

California

Bills Passed.—A. 796, which passed the senate April 18, to amend the **health and safety code**, proposes to authorize a person, by will, to direct that the whole or any part of his remains be given to a teaching institution, university, college or legally licensed hospital, or to the state director of public health. A. 797, which passed the senate April 18, proposes that every person of sound mind over the age of 18 years may by will **dispose of the whole or any part of his or her body** to a teaching institution, university, college or legally licensed hospital, either for use as such institution, university, college or hospital may see fit or for use as expressly designated in the will. S. 895, which passed the senate April 10, to amend the health and safety code, proposes to require every licensed physician and surgeon or other person engaged in prenatal care of a pregnant woman, or attending such woman at the time of delivery, to obtain a **blood specimen** of such woman at the time of the first professional visit or within ten days thereafter and to submit such sample to an approved laboratory for a laboratory test for syphilis. S. 1070, which passed the senate April 16, to amend the business and professions code, proposes that conviction of a violation of the **narcotics or dangerous drugs** statutes of the state shall constitute unprofessional conduct. S. 1071, which passed the senate April 16, to amend the business and professions code, proposes that the use or prescribing for or administering to himself of cocaine, opium, morphine, codeine, heroin, alpha eucaine, beta eucaine, chloral hydrate, paraldehyde or barbituric acid, **any of the narcotics, or alcoholic beverages** to an extent which is injurious to his practice by any person licensed under the provisions of the business and professions code shall constitute unprofessional conduct.

Delaware

Bill Enacted.—H. 42, which was approved April 18, requires all persons desiring to obtain a **marriage license** to obtain a certificate from a duly licensed physician showing that the applicant has undergone a standard serologic test for syphilis and is not infected with such disease in a communicable stage. According to the last report received by this Bureau, the law also contains a house amendment which defines the term "physician" as meaning any duly licensed medical, osteopathic or chiropractic practitioner.

Florida

Bills Introduced.—H. 12 proposes the creation and establishment of a **college of medicine** and dentistry as a part of the University of Florida. S. 151, to amend the law relating to the practice of massage, proposes to redefine the meaning of the practice so as to include the use of electrical apparatus.

Illinois

Bill Introduced.—H. 373 proposes that no person who has been convicted of a **penitentiary offense** or who has been convicted in connection with the illegal sale of drugs or narcotics under the laws of any state or of the federal government shall be eligible for appointment or shall be employed as a physician in any state institution.

Iowa

Bills Enacted.—H. 314, which was approved April 17, is a hospital survey and construction act requiring a survey of existing hospital facilities throughout the state and the development of a program for the construction of additional facilities. The law also requires the appointment of a **hospital advisory council** and designates the commissioner of public health as the agent to apply for and receive federal funds to be used for assistance in the state survey or construction program. H. 465, which was approved April 22, is a law for the licensing and regulating of hospitals. S. 381, which was approved April 17, provides for the licensing and inspecting of **nursing homes or boarding homes** for the aged.

Kansas

Bills Enacted.—H. 102, which was approved April 9, requires all persons applying for a **marriage license** to present a certificate signed by a physician legally qualified under the laws of the state of Kansas or of the state in which he is practicing that the applicant is not infected with syphilis in a stage making it communicable to a marital partner. H. 103, which was approved April 8, 1947, provides for the establishment of **an advisory laboratory commission** to formulate procedures and qualifications for the registering and approving of laboratories performing serologic examinations, to formulate procedures and methods of examination and approval of persons performing serologic tests in approved laboratories and to recommend to the state board of health the adoption of the procedures and qualifications so approved.

Maryland

Bill Passed.—H. 69, which passed the senate March 28, proposes the creation of a state **board of physical therapy examiners** and defines physical therapy as "the treatment of human injuries, diseases or disabilities by means of the healing properties of massage, ultraviolet rays, mechanical devices, heat, cold, air, light, water and electricity, but

not by means of roentgen rays, radium, surgery or drugs." Among other things the proposal also states that a physical therapist is one who treats only patients diagnosed and referred by licensed medical doctors.

Bills Enacted.—H. J. R. 16, which has become chapter J. R. 14 of the Laws of 1947, provides for the appointment of a commission to study **medicolegal psychiatry** in the state. S. 358, which has become chapter 185 of the Laws of 1947, exempts from the medical practice act **Christian science practitioners** duly registered in the *Christian Science Journal* of the Christian Science Publishing Society, Boston, who treat human ills in accordance with the tenets of Christian science.

Massachusetts

Bill Introduced.—H. 1921 proposes to require every school superintendent, principal, director, teacher, etc. whose duties bring him into direct contact with school children to undergo an **x-ray examination** of his chest to determine the presence of tuberculosis.

Michigan

Bill Passed.—S. 201, which passed the senate April 18, proposes to authorize the state commissioner of health to regulate and promulgate rules and regulations controlling **the human use of animals** for the diagnosis and treatment of human and animal diseases, the advancement of veterinary, dental, medical and biologic sciences, and the testing and diagnosis, improvement and standardization of laboratory specimens, biologic products, pharmaceuticals and drugs. The proposal would further require that no person, firm or corporation shall keep or use animals for experimental purposes unless registered to do so by the state commissioner of health.

Rhode Island

Bill Introduced.—H. 836, to amend the administrative act of 1939, proposes, among other things, that the board of examiners in **the basic sciences** shall be selected as follows: Two members shall be selected from the combined faculties of Brown University, Providence College and Rhode Island State College, who shall be full time professors or associate or assistant professors in the basic science subjects; and the third member of the said board shall be a pathologist of training and experience sufficient to give him a broad knowledge of the subject.

Texas

Bill Introduced.—H. 786 proposes the creation of a **board of eugenics** and proposes further to authorize the superintendent of state institutions for the insane to perform sexual sterilization operations on inmates after having complied with the provisions of the proposal.

Coming Medical Meetings

American Medical Association, Atlantic City, June 9-13. Dr. George F. Lull, 535 N. Dearborn St., Chicago 10, Secretary.

Aero Medical Association of the United States, Atlantic City, Ritz-Carlton Hotel, June 4-6. Dr. David S. Brachman, 1016 Dime Bldg., Detroit 26, Secretary.

American Association for Thoracic Surgery, St. Louis, May 28-30. Dr. Richard H. Meade Jr., 55 E. Washington St., Chicago 2, Secretary.

American Association of Genito-Urinary Surgeons, Absecon, N. J., June 4-6. Dr. Charles C. Higgins, 2020 E. 93d St., Cleveland 6, Secretary

American Association of Pathologists and Bacteriologists, Chicago, May 16-17. Dr. Howard T. Karsner, 2085 Adelbert Road, Cleveland 6, Secretary.

American Association of Plastic Surgeons, Nashville, Tenn., May 5-6 and Memphis, Tenn., May 7-8. Dr. Frederick A. Figi, 102 Second Ave. S.W., Rochester, Minn., Secretary.

American Association of the History of Medicine, Cleveland, May 25-26. Dr. Howard Dittrick, 2020 E. 93d St., Cleveland 6, Secretary.

American Association on Mental Deficiency, St. Paul, Minn., May 28-31. Dr. Neil A. Dayton, Box 51, Mansfield Depot, Conn., Secretary.

American College of Allergists, Atlantic City, Hotel Senator, June 6-8. Dr. Fred W. Wittich, 401 LaSalle Medical Bldg., Minneapolis 2, Secretary.

American College of Chest Physicians, Atlantic City, Ambassador Hotel, June 5-8. Mr. Murray Kornfeld, 500 N. Dearborn St., Chicago 10, Executive Secretary.

American College of Radiology, Atlantic City, Haddon Hall, June 7-8. Mr. Mac F. Cahal, 20 N. Wacker Drive, Chicago 6, Executive Secretary.

American Dermatological Association, Murray Bay, Quebec, Can., June 1-5. Dr. Harry R. Foerster, 208 E. Wisconsin Ave., Milwaukee, Wis., Secretary.

American Diabetes Association, Atlantic City, Chalfonte-Haddon Hall, June 7-9. Dr. Cecil Striker, 1019 Provident Bank Bldg., Cincinnati 2, Secretary.

American Geriatrics Society, Atlantic City, Hotel Brighton, June 5-7. Dr. Malford W. Thewlis, 25 Mechanic St., Wakefield, R. I., Secretary.

American Heart Association, Atlantic City, Hotel President, June 6-7. Dr. Howard B. Sprague, 50 W. 50th St., New York, Secretary.

American Medical Women's Association, Atlantic City, June 7-8. Dr. Helen F. Schrack, 216 N. Fifth St., Camden, N. J., Secretary.

American Neisserian Medical Society, Atlantic City, Marlborough-Blenheim Hotel, June 8. Dr. William L. Fleming, 750 Harrison Ave., Boston, Secretary.

American Neurological Association, Atlantic City, Ambassador Hotel, June 16-18. Dr. Walter O. Klingman, 195 Ft. Washington Ave., New York 32, Secretary.

American Ophthalmological Society, Hot Springs, Va., June 5-7. Dr. Walter S. Atkinson, 129 Clinton St., Watertown, N. Y., Secretary.

American Pediatric Society, Stockbridge, Mass., May 13-15. Dr. Henry G. Poncher, 1819 W. Polk St., Chicago 12, Secretary.

American Physiological Society, Chicago, May 18-22. Dr. Maurice Visscher, University of Minnesota, Minneapolis, Secretary.

American Proctologic Society, Atlantic City, June 7-8. Dr. Harry E. Bacon, 2031 Locust St., Philadelphia 3, Secretary.

American Psychiatric Association, New York, Hotel Pennsylvania, May 19-23. Dr. Leo H. Bartemeier, General Motors Bldg., Detroit, Secretary.

American Radium Society, Atlantic City, June 8. Dr. Hugh F. Hare, 605 Commonwealth Ave., Boston 15, Secretary.

American Rheumatism Association, Atlantic City, Ritz-Carlton Hotel, June 7. Dr. Richard H. Freyberg, 321 E. 42d St., New York 17, Secretary.

American Society for Clinical Investigation, Atlantic City, Chalfonte-Haddon Hall, May 5. Dr. Eugene A. Stead Jr., Grady Hospital, Atlanta 3, Georgia, Secretary.

American Society for Experimental Pathology, Chicago, May 19-23. Dr. Frieda S. Robschlit-Robbins, 260 Crittenden Bldv., Rochester, N. Y., Secretary.

American Society for Pharmacology and Experimental Therapeutics, Chicago, May 18-22. Dr. Harvey B. Haag, Medical College of Virginia, Richmond 19, Va., Secretary.

American Society for the Study of Sterility, Atlantic City, Hotel Strand, June 7-8. Dr. John O. Haman, 490 Post St., San Francisco 2, Secretary.

American Society of Biological Chemists, Chicago, May 18-22. Dr. Otto A. Bessey, Public Health Research Institute, New York 9, Secretary.

American Society of Clinical Pathologists, Atlantic City, June 4-8. Dr. Alfred S. Giordano, 531 N. Main St., South Bend, Ind., Secretary.

American Society of Electroencephalography, Atlantic City, Marlborough-Blenheim Hotel, June 13-14. Dr. Robert S. Schwab, Massachusetts General Hospital, Boston 14, Secretary.

American Therapeutic Society, Atlantic City, Chalfonte Hotel, June 6-7. Dr. Oscar B. Hunter, 1835 I St., N. W., Washington 6, D. C., Secretary.

Arizona State Medical Association, Tucson, May 7-10. Dr. Frank J. Milloy, 112 N. Central Ave., Phoenix, Secretary.

Association for the Study of Internal Secretions, Atlantic City, June 6-7. Dr. Henry H. Turner, 1200 N. Walker St., Oklahoma City 3, Secretary.

Association of American Physicians, Atlantic City, May 6-7. Dr. Joseph T. Wearn, Lakeside Hospital, Cleveland 6, Secretary.

Federation of American Societies for Experimental Biology, Chicago, May 18-22. Dr. William H. Chambers, 1300 York Ave., New York 21, Secretary.

Idaho State Medical Association, Sun Valley, June 16-19. Dr. William B. Handford, Caldwell, Secretary.

Illinois State Medical Society, Chicago, Palmer House, May 12-14. Dr. Harold M. Camp, 224 S. Main St., Monmouth, Secretary.

Kansas Medical Society, Topeka, May 12-15. Dr. John M. Porter, 512 New England Bldg., Topeka, Secretary.

Louisiana-Mississippi Ophthalmological and Otolaryngological Society, Biloxi, Miss., Buena Vista Hotel, May 5. Dr. Edley H. Jones, 1301 Washington St., Vicksburg, Miss., Secretary.

Louisiana State Medical Society, New Orleans, May 12-14. Dr. P. T. Talbot, 1430 Tulane Ave., New Orleans 13, Secretary.

Maine Medical Association, York Harbor, Marshall House, June 22-24. Dr. Frederick R. Carter, 142 High St., Portland 3, Secretary.

Massachusetts Medical Society, Boston, Hotel Statler, May 20-22. Mr. Robert St. B. Boyd, 8 Fenway, Boston 15, Executive Secretary.

Medical Library Association, Cleveland, Wade Park Manor, May 27-29. Miss Heath Babcock, New York State Medical Library, Albany 1, New York, Secretary.

Mississippi State Medical Association, Biloxi, May 6-8. Dr. T. M. Dye, Box 295, Clarksdale, Secretary.

Montana, Medical Association of, Missoula, June 26-28. Dr. H. T. Caraway, 115 N. 29th St., Billings, Secretary.

National Gastroenterological Association, Atlantic City, Hotel Chelsea, June 4-6. Dr. G. Randolph Manning, Room 319, 1819 Broadway, New York, Secretary.

National Tuberculosis Association, San Francisco, June 16-19. Dr. F. D. Hopkins, 1790 Broadway, New York 19, Executive Secretary.

New Hampshire Medical Society, Portsmouth, Hotel Wentworth, June 19-20. Dr. Carleton R. Metcalf, 5 South State Street, Concord, Secretary.

New York, Medical Society of the State of, Buffalo, May 5-9. Dr. Walter P. Anderton, 292 Madison Avenue, New York 19, Secretary.

North Carolina, Medical Society of the State of, Virginia Beach, Va., Cavalier Hotel, May 12-14. Dr. Roscoe D. McMillan, P. O. Box 232, Red Springs, Secretary.

North Dakota State Medical Association, Fargo, May 25-27. Dr. L. W. Larsen, 221 Fifth St., Bismarck, Secretary.

Ohio State Medical Association, Cleveland, May 6-8. Mr. Charles S. Nelson, 79 E. State St., Columbus 15, Executive Secretary.

Oklahoma State Medical Association, Tulsa, Mayo Hotel, May 14-16. Mr. R. H. Graham, 210 Plaza Court Bldg., Oklahoma City, Executive Secretary.

Rhode Island Medical Society, Providence, May 14-15. Dr. Morgan Cutts, 106 Francis St., Providence 3, Secretary.

Society of American Bacteriologists, Philadelphia, May 13-16. Dr. Leland W. Parr, 1335 H St. N. W., Washington 5, D. C., Secretary.

South Dakota State Medical Association, Rapid City, May 31-June 3. Dr. Roland G. Mayer, 22½ S. Main St., Aberdeen, Secretary.

Texas, State Medical Association of, Dallas, Adolphus Hotel, May 5-8. Dr. Holman Taylor, 1404 W. El Paso St., Fort Worth 3, Secretary.

United States-Mexico Border Public Health Association, San Diego, California, and Tijuana, Mexico, May 6-8. Dr. James A. Grider Jr., 151 U. S. Court House, El Paso, Texas, Secretary.

West Virginia Medical Association, Charleston, May 12-14. Mr. Charles Lively, 1031 Quarrier St., Charleston 24, Secretary.

Wyoming State Medical Society, Sheridan, June 23-25. Dr. George E. Baker, 226 E. 2d St., Casper, Secretary.

GOVERNMENT SERVICES

ARMY

GENERAL KIRK'S PLAN FOR A MEDICAL SERVICE FOR THE ARMED FORCES

The following statement, in part, was presented before the Senate Armed Forces Committee, April 18, by Major Gen. Norman T. Kirk, the Surgeon General. It represents his personal plan and is not official:

Initially, the Armed Forces Medical Service would be formed from the medical services of the Army and Navy, including their personnel and the Medical Department facilities now operated by these services.

The Armed Forces Medical Service would be commanded by a Director General appointed from the senior medical officers of the Regular Medical Corps of the Army or Navy to serve on the staff of the Secretary of National Defense and to be responsible to him for advice on the health and medical care of all components of the armed forces.

The Director General would prepare policies, plans and directives governing the medical service and operate, command and administer all Medical Department troops and installations not attached to major forces.

Operations of the Medical Service in the Zone of the Interior and overseas theaters would be decentralized to Deputy Directors, who would supervise and command the medical services and installations in these regional areas except those attached to a major force. The regional areas or districts would correspond to those set up by the armed forces.

The Armed Forces Medical Service, under the Director General, would be charged with (*a*) operation of common hospitalization for the armed forces (all fixed hospitalization), including general, station and convalescent hospitals in the Zone of the Interior and overseas departments and in the Communication Zone in war; (*b*) the operation of a preventive medicine service, vital statistics, and common sick and wounded records; (*c*) the operation of a common research and development program, clinical and research laboratories, the Army Medical Library and the Army Institute of Pathology; (*d*) common procurement, storage and issue of medical supplies; (*e*) personnel procurement, officers and civilian employees; technical training and assignment of all commissioned, enlisted and civilian employees; (*f*) organization and technical training of all Reserve components and affiliated medical units; (*g*) preparation and defense of budgetary estimates for the requirements of its operations; the construction and repair of all required medical installations; (*h*) the coordination and direction of evacuation of sick and wounded by air and sea (medical regulator).

Each major force would have a Surgeon General, appointed from the Medical Corps of the Armed Forces Medical Service, and such additional attached medical troops and installations as the Secretary of National Defense determined necessary for the force commander to perform the medical mission assigned to him.

The Surgeon General of each of the three forces would have the staff required to carry out his mission, the attached medical personnel to each to consist of such specialized and nonspecialized personnel and such units as would be required by that force. He would be responsible for the specialized technical and tactical training of the attached medical personnel and for the research and development pertaining to his special needs; e. g.:

Surgeon General of the Army.—Tactical training of battalion and regimental detachments, medical battalions, medical groups, dispensaries, field and evacuation hospitals.

Surgeon General of the Navy.—Specialized and tactical training of attached medical personnel for duty aboard ships, including hospital ships, Naval Air Arm and research and development in connection therewith, dispensary service, evacuation of sick and wounded by ship.

Surgeon General of Air Force.—Specialized and tactical training of attached medical personnel such as flight surgeons and flight nurses, research and development as it applies to the health of flying personnel, air evacuation of the sick and wounded, and dispensary service.

The plan provides for complete unification of those phases of medical service which are common to all armed forces and at the same time provides for the Ground Forces, the Air Forces and the Navy types of organic medical service completely adequate for their special needs.

General Kirk stated that he agreed with the remarks of Senator Thomas of Utah (published in the *Congressional Record* March 14) in which the senator pointed out that the medical departments of the Army and Navy have identical primary missions, that there was in the past war an acute and serious scarcity of trained medical personnel, that parallel systems of hospitalization, evacuation, and the procurement, storage and issue of medical supplies were wasteful in terms of funds, personnel and efficiency, and that medical service during the war, no matter how good, could have been better had there been a single integrated medical service.

If integration of the two medical departments would have improved medical service in the war just past, it will be vital in any future war and likewise is vital during the peace.

There are not now nor will there ever be enough competent trained medical, dental and nursing personnel available to provide the sick, injured and wounded soldier, flier, sailor or marine with the type of medical care demanded by the people of this nation without the strictest economy in the use of that personnel. Even now the Medical Corps of both the Regular Army and the Regular Navy are far below their authorized strength, and efforts to recruit civilian doctors into these corps have not been successful. Legislation authorizing increased pay and better promotion may help solve this peacetime problem. In the event of a war of equal or greater magnitude than World War II there will not be sufficient skilled doctors in the United States to staff three separate medical services. This fact necessitates an organization capable of making the most effective and economical use of all the medical resources of the nation. Moreover, another war may involve the civilian population of the United States. Only a single unified medical service can plan for and successfully meet such an emergency.

General Kirk stated that unification of the medical services should begin now. If unification is vital to meet a national emergency, he said, it cannot be delayed until that emergency is at hand. Moreover, if no action is taken now to unify the army and navy medical services, the Air Forces will wish and may receive authorization for a complete medical service, thus spreading our weak medical resources still thinner, and this at a time when both the Army and the Navy are unable to recruit to their authorized strength.

If a plan for the unification of the medical services should be put into operation now, a certain period would be required before a complete integration could be effected smoothly. Many changes would be required in the present operating procedures of the two medical departments as well as enabling legislation. However, General Kirk believes that a completion date two to three years hence should be specified.

"I am sure," he said, "that American medicine including its leaders and the thousands of its members who served so well in the military forces during the past war, if asked, would demand a unified medical service for the armed forces."

Any plan for unification of the medical services, General Kirk said, will undoubtedly meet with opposition from some force commanders who will desire complete medical services under their command. Also there will be some opposition on the part of officers of the two medical services in which tradition and *esprit de corps* have naturally developed during many years. "However, after many years' association with medical officers of both the Army and the Navy I am convinced that in most instances their common training, their similar points of view and their singleness of purpose will eventually outweigh any prejudices they may have.

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Medical News

(PHYSICIANS WILL CONFER A FAVOR BY SENDING FOR THIS DEPARTMENT ITEMS OF NEWS OF MORE OR LESS GENERAL INTEREST: SUCH AS RELATE TO SOCIETY ACTIVITIES, NEW HOSPITALS, EDUCATION AND PUBLIC HEALTH.)

ARIZONA

Annual State Medical Meeting.—The fifty-sixth annual meeting of the Arizona State Medical Association will be held at the Hotel Pioneer, Tucson, May 7-10 under the presidency of Dr. George O. Bassett, Prescott. The out of state speakers will be Dr. George T. Pack, New York, "Radical Surgical Treatment of Cancer of the Stomach," and Dr. Emil Novak, Baltimore, "Indications, Limitations and Hazards of Endocrine Therapy in Gynecology." Numerous members of the association will present papers, some of the subjects being recent advances in the treatment of heart disease, use of potassium chloride in treatment of dehydration and diarrhea in infants, management and mechanism of functional uterine bleeding and epidemic hepatitis. The president's dinner and dance will be May 8 at 7:30. The Woman's Auxiliary will meet during the sessions. The Arizona chapter of the American College of Chest Physicians will hold afternoon and evening sessions May 6.

CALIFORNIA

Society News.—The Los Angeles Society of Allergy, organized as a section of the Los Angeles County Medical Association, elected Dr. George Piness, Los Angeles, president; Dr. Willard S. Small, Pasadena, vice president, and Dr. Frank G. Crandall Jr., Los Angeles, secretary and treasurer.

Five Year Study of Poliomyelitis Virus.—A five year study, financed with $200,000 March of Dimes funds from the National Foundation for Infantile Paralysis, will be conducted at the California Institute of Technology, Pasadena, under the direction of Linus Pauling, Ph.D., and George W. Beadle, heads of the chemistry and biology divisions, respectively. The study will attempt to determine the complex structure and organization of the poliomyelitis virus by a study of the fundamental structure and organization of proteins and related compounds.

Course in Nuclear Physics.—The University of California Medical School, Berkeley-San Francisco, in association with University Extension, University of California, announces a course in the application of nuclear physics to the biologic and medical sciences, to be given at the medical center, San Francisco, from June 30 through July 18. It will consist of didactic lectures, laboratory demonstrations and seminars for round table discussions and will be open to workers in the fields of medical and biologic research. For information address Dr. Stacy R. Mettier, Head of Postgraduate Instruction, Medical Extension, University of California Medical Center, San Francisco 22.

CONNECTICUT

Graduate Course in Hospital Administration.—Yale University School of Medicine, New Haven, will establish next September a graduate course in hospital administration in its department of public health, made possible by a grant from the W. K. Kellogg Foundation. Dr. Clement C. Clay, New Haven, assistant professor of hospital administration, will act as director. Facilities of Grace-New Haven Community Hospital, university departments and schools, and hospitals and other agencies in the New England area will be utilized. Nine months of the total twenty-one month training period will be spent in residence at the university before the student becomes an administrative intern or resident in an approved hospital, after which he is a candidate for a master's degree. Three classes of students will be eligible for admission to the new course: doctors of medicine, graduate nurses who have a bachelor's degree and persons who have a bachelor's degree without special training in medicine or nursing. Some practical experience in hospitals or medical care agencies is a prerequisite. Dr. Clay received his degree of doctor of medicine and master of surgery at McGill University Faculty of Medicine, Montreal, Que., in 1932.

GEORGIA

Columbus Selected for Long Range BCG Study.—In cooperation with the state and local health authorities the U. S. Public Health Service has selected the city of Columbus, Ga., for a long range study of BCG vaccination for tuberculosis. It is planned to start this study, which will require several years, with school children, especially those highly subject to exposure to tuberculosis; only children, however, who show through tests that they have not previously been infected with tuberculosis will be vaccinated. The first vaccination program is expected to continue until about May 17; then the testing and vaccination teams will return to Columbus next fall to determine whether revaccination is necessary in some cases. The permission of parents will be obtained prior to vaccinations. According to the New York *Times* the vaccine for this experiment will come from the BCG laboratory at Cook County Hospital, Chicago, where it is produced jointly by the Public Health Service, the College of Medicine of the University of Illinois, Chicago, and the City of Chicago Municipal Tuberculosis Sanitarium.

ILLINOIS

The Tenth Cancer Diagnostic Clinic.—The tenth state aided cancer diagnostic clinic, opened April 10 at Herrin Hospital, Herrin, will hold clinic sessions every second and fourth Thursday of each month at 1 p. m., patients being admitted only through referral from their family physician.

Smallpox Vaccination Advisable.—Pointing to the current flare-up of virulent smallpox in New York City, Dr. Roland R. Cross, state director of public health, advised vaccination of every one who has not been vaccinated within three years. Although the disease is at low incidence in Illinois at this time, he said, it is quite prevalent in many other countries, and the present swiftness of travel means that persons can reach this country within a few hours after being exposed to the disease elsewhere.

Annual State Medical Meeting.—The Illinois State Medical Society will hold its annual meeting at the Palmer House, Chicago, May 12-14 under the presidency of Dr. Robert S. Berghoff, Chicago. The Oration in Surgery will be given Monday morning by Dr. Alfred Blalock, Johns Hopkins Hospital, Baltimore, on "Surgical Treatment of Congenital Cardiovascular Defects." On Wednesday afternoon the Oration in Medicine will be delivered by Dr. Herman Hilleboe, Assistant Surgeon General, Washington, D. C., on "The United States Public Health Service and the Private Practice of Medicine." Other speakers at the sessions will be:

Dr. Abe B. Baker, Minneapolis, Diagnosis and Treatment of Bulbar Poliomyelitis.
Dr. D. W. Gordon Murray, Toronto, Ont., Anticoagulants in the Treatment of Thrombophlebitis and Phlebothrombosis.
Dr. F. Bayard Carter, Durham, N. C., Mycotic Infections.
Dr. Roscoe L. Sensenich, South Bend, Ind., Are We Tending to Overemphasize Specialization?
Dr. Fred J. Hodges, Ann Arbor, Mich., X-Ray Demonstrable Lesions of the Colon.
Dr. Franklin H. Top, Detroit, subject to be announced.
Dr. Elexious T. Bell, Minneapolis, Pathologic Anatomy of Diabetes.
Dr. F. Bruce Fralick, Ann Arbor, Mich., subject to be announced.

For the first time each section of the society has the privilege of inviting an out of state physician in each specialty represented. At the annual dinner Tuesday evening the main address will be given by Father Alphonse M. Schwitalla, S. J., Ph.D., dean of the St. Louis University School of Medicine, St. Louis. A veterans' service dinner is planned for Monday evening. Numerous societies have planned meetings and luncheons, including the alumni associations of the University of Illinois College of Medicine and Loyola University School of Medicine, both of Chicago. The Woman's Auxiliary will meet May 12 and 13 at the Congress Hotel.

Chicago

Dinner to Honor Dr. Dogliotti.—The Chicago chapter of the International College of Surgeons will give a dinner and reception in honor of Professor A. Mario Dogliotti, head of the department of surgery of the University of Turin, Italy, May 5 at 6:30 in the Gold Coast Room of the Drake Hotel. Professor Dogliotti, who is president of the Italian chapter of the college, is visiting in the United States at the invitation of the Lahey Clinic and the Massachusetts General Hospital, Boston.

Jessie Horton Koessler Fellowship.—The Jessie Horton Koessler Fellowship of the Institute of Medicine of Chicago for the aid of research in biochemistry, physiology, bacteriology or pathology will be available September 1. The stipend is $500 a year, with the possibility of renewal for one or two years. Only such applications will be considered as are approved by the head of a department in the fields mentioned or by the director of a research institute or laboratory in Chicago and which stipulate that the recipient of the fellowship shall be given adequate facilities for carrying out the proposed research. Applications will be received up to July 1, and they should be sent in quadruplicate to Dr. Paul R. Cannon, Chairman of the Committee, 950 East 59th Street, Chicago 37. Since there are no formal blanks, applications should be made by letter.

LOUISIANA

Annual State Medical Meeting.—The annual meeting of the Louisiana State Medical Society will be held at the Roosevelt Hotel, New Orleans, May 12-14 under the presidency of Rhett G. McMahon, Baton Rouge. A clinicopathologic conference will be a part of the opening meeting. Two symposiums, one on antibiotics and one on hypertension, have been scheduled for Tuesday. Out of state speakers at the sessions will be:

Dr. Harry S. Gold, New York, Drugs Used in Treatment of Heart Diseases.
Dr. Maxwell Finland, Boston, Present Day Chemotherapy on Antibiotics.
Dr. George Salmon, Houston, Texas, Use of Antibiotics in Pediatrics.
Dr. Joseph G. Molner, Detroit, Epidemiology and Recent Developments in Poliomyelitis.
Dr. Robert D. Mussey, Rochester, Minn., Circumvallate Placenta: Symptoms and Management.

The president's reception and dinner dance will be given Tuesday evening at 8 o'clock. Dinners have been arranged for members of the Louisiana Pediatric Society and the American Board of Obstetrics and Gynecology.

MASSACHUSETTS

Annual State Medical Meeting.—The Massachusetts Medical Society will hold its one hundred and sixty-sixth annual meeting at the Hotel Statler, Boston, May 20-22 under the presidency of Dr. Dwight O'Hara, Boston. Three symposiums are scheduled for the general sessions, one on industrial medicine Tuesday morning, one on the distribution of medical care for the people of Massachusetts Tuesday afternoon and one on bronchiectasis Wednesday afternoon. Among general session speakers will be:

Dr. Frederick D. Weidman, Philadelphia, Ramifications of the Xanthomas.
Dr. Perrin H. Long, Baltimore, The Uses and Abuses of Chemotherapy.
Dr. Perry P. Volpitto, Augusta, Ga., Use of Anesthetic Drugs in Medical Practice.
Dr. Michael E. DeBakey, New Orleans, Thrombophlebitis and Phlebothrombosis.
Dr. Hans Selye, Montreal, Canada, Diseases of Adaptation in Their Application to Practical Psychosomatic Medicine.

Section meetings, to be addressed by some general session speakers, will be Wednesday and Thursday from noon to 2 p. m. Other subjects to be discussed at the meetings include "Diarrhea of the Newborn: Its Cause and Prevention," "Review of Some Recently Defined Virus Diseases," "Management of Diabetes and Its Complications" and "Thiouracil and Allied Drugs in Hyperthyroidism." The annual oration will be delivered Tuesday morning by Dr. Leland S. McKittrick, Boston, on "Medical Care in Our Free Society." The Shattuck Lecture will be given Tuesday evening by Dr. William Dock, Brooklyn, on "Clinical Significance of Circulatory Peculiarities of Some of the Vital Organs." Dr. Harrison H. Shoulders, Nashville, Tenn., President of the American Medical Association, will give the dinner address Wednesday evening on "The Responsibilities of the Medical Profession."

NEW YORK

Annual State Medical Meeting.—The annual meeting of the Medical Society of the State of New York will be at the Memorial Auditorium, Buffalo, May 5-9 under the presidency of Dr. Louis H. Bauer, Hempstead. The first scientific program will be presented Wednesday at the general session. An extensive program of sectional meetings has been arranged at which the following out of state physicians will speak:

Heber H. Ryan Jr. and Curtiss B. Hickcox, Philadelphia, Complications with Pentothal Anesthesia.
Donald H. Stubbs, Alexandria, Va., Treatment of Intractable Pain.
Charles M. Barbour and Ralph M. Tovell, Hartford, Conn., Experiences with the Use of Intravenous Procaine.
Francis D. Moore, Boston, Treatment of Peptic Ulcer.
George Berkett, New Orleans, Effect of Drilling Through Neck of Femur in Perthes' Disease.
Bronson Crothers, Boston, Neurologic Procedures in Pediatric Practice.
Leon Schwartz, Bethesda, Md., Ringworm of the Scalp.
Samuel Brown, Cincinnati, Differential Diagnosis of Abdominal Tumors.
Andrew C. Ivy, Chicago, Peptic Ulcer.
Harry E. Bacon and Robert J. Rowe, Philadelphia, Primary Resection for Cancer of the Lower Bowel.
Sidney H. Licht, Cambridge, Mass., The Prescription of Occupational Therapy.

A Teaching Day has been arranged by the Council Committee on Public Health and Education for Tuesday. Obstetrics and gynecology, pediatrics, medicine and surgery will be the subjects discussed by members of the society. The annual banquet will be Wednesday at the Hotel Statler. The Woman's Auxiliary will meet May 4-7 at the Hotel Statler, and the Women's Medical Society of New York State will hold its annual meeting at the Hotel Statler May 4-5. Both technical and scientific exhibits will be on display.

New York City

License Revoked.—The Board of Regents voted Oct. 18, 1946 that the medical license issued to Dr. Frank Celano, Westbury, through indorsement of his Maryland medical license, be revoked, annulled and canceled and that his registration or registrations as a physician be ordered annulled and canceled of record.

Expand Industrial Hygiene Program.—To meet the growing demand for trained personnel the Columbia University School of Public Health is developing courses of study for physicians, nurses, engineers and chemists whose chief interest lies in the field of industrial hygiene or occupational medicine. For the academic year starting in September properly qualified students will be accepted as candidates for the degree of Master of Public Health or Master of Science in Industrial Hygiene. The curriculum will include lectures, seminars, demonstrations, laboratory exercises and field work appropriate to the interests of the students. Students working toward the Master of Public Health degree will be required to take, in addition to their industrial hygiene work, courses in other public health subjects such as biostatistics, epidemiology, administration, sanitary science and health education. Those enrolled for the Master of Science degree will be permitted to concentrate to a greater extent on industrial hygiene subjects. Information may be obtained from the Director, Columbia University School of Public Health, 600 West 168th Street, New York 32.

Institute for Cancer Research.—The cornerstone of the Sloan-Kettering Institute for Cancer Research, central unit of the $15,000,000 Memorial Cancer Center that will occupy the first block between New York and First avenues and 67th and 68th streets, was laid April 7. Alfred P. Sloan Jr., chairman of the board of directors; Charles F. Kettering, vice president and director of research of General Motors, and Dr. Lewis H. Weed, chairman, division of medical sciences, National Research Council, were among the speakers. Three hundred guests of honor attended exercises at the Memorial Hospital for the Treatment of Cancer and Allied Diseases. The institute, which will be ready for occupancy late this year, was provided for through the Alfred P. Sloan Foundation, which has given $2,000,000 for its construction and $2,000,000 to assist in operating it for ten years. The American Cancer Society, through the New York City Cancer Committee, has granted $250,000 for research and will expand its funds after the current drive. The fifteen story building will provide space to carry on a growing program of research which will include studies now in progress in Memorial Hospital laboratories as well as new ones. Units now in operation include laboratories for pathology, research and clinical investigation, pharmacology, biophysics, physics, antibiotics and hormone chemistry as well as departments of chemotherapy, protein chemistry and organic chemistry. The block where the center stands was given by John D. Rockefeller Jr. in 1936 together with $3,000,000 to erect the present hospital. The 68th Street façade of the institute will be marked by an unadorned panel extending to the top of the building and bearing the inscription "In This Institute a Few Labor Unceasingly That Many May Live."

OHIO

Ohio State Medical Alumni Dinner.—A dinner of graduates of the Ohio State College of Medicine, Columbus, attending the Centennial Celebration in Atlantic City will be held June 11 at the Claridge Hotel. They will be given a first hand description of Ohio's new nine million dollar medical center and will be shown a film, the "University in Transition." Those desiring reservations are asked to mail checks for $6 to Dr. Alfred H. Whittaker, 1427 East Jefferson Avenue, Detroit.

PENNSYLVANIA

Four Professors Appointed.—Four members of the faculty of the University of Pennsylvania School of Medicine, Philadelphia, have been appointed to fill professorships in the school. They are Drs. T. Grier Miller, Truman G. Schnabel, Charles C. Wolferth and Francis C. Wood, all of Philadelphia. The three first-named men now hold full professorships in clinical medicine, while Dr. Wood's appointment marks an advancement from an assistant professorship in medicine. When the new appointments become effective at the beginning of the university's fiscal year, July 1, Dr. Wood will also become chairman of the department of medicine, succeeding Dr. O. H. Perry Pepper. After forty years of service Dr. Pepper asked to be relieved of his administrative duties but will continue as professor of medicine and will teach and practice in the university hospital until he reaches the age of retirement.

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TEXAS

Medical Aid in the Texas City Disaster.—The John Sealy and other affiliated hospitals of the University of Texas Medical Branch, Galveston, handled 408 casualties resulting from the Texas City disaster of April 16. Two emergency first aid and clearing station teams were at the scene of the explosion within forty minutes. These teams were formed of orthopedic surgeons, residents and senior medical students. They assisted in the efficient work of Texas City physicians and the industrial first aid groups in the prompt care and clearance of the injured to the various hospitals. Casualties began to arrive at the receiving station in the outpatient clinic within an hour. Three hundred and sixty-two casualties were classified, given preliminary treatment and hospitalized within the first five hours. Volunteer medical and nursing personnel and teams sent by the army and navy enabled ten operating groups to function during the following night and day. Some 40 additional casualties were admitted. By April 20 twelve deaths had occurred, two from gas gangrene, 120 patients had been discharged, 90 convalescents had been transferred to the army hospital at Fort Crockett, and the remainder were on routine hospital care. Few burns were encountered. Multiple puncture wounds, serious contusions and compound fractures, together with head, ear and eye injuries were frequent. Impressive were the results of close team work between skilled specialists. The large pool of medical and nursing students aided greatly in furnishing special technical help at all times. The anatomy staff and freshmen medical students assisted in the classification and identification of the dead. The blood bank and emergency supplies of whole blood furnished by Dr. Joel M. Hill of the Dallas Blood Bank of the Baylor University Hospital, Dallas, were major factors in the successful handling of the seriously injured. The American Red Cross responded promptly with large amounts of emergency supplies and with clerical personnel. A detailed report of the medical management of the casualties in the disaster will be prepared for publication in *Texas Reports on Biology and Medicine*.

WEST VIRGINIA

Diabetic Survey.—The Committee on Diabetes of the West Virginia State Medical Association at the initial meeting in Charleston April 3 decided to make an immediate study of the feasibility of establishing diabetic clinics in various sections of the state. A subcommittee was appointed to devise a method for a census of persons with diabetes on both a county and a state basis. It is proposed to obtain the bulk of the information from doctors, but information would also be obtained from diabetic patients by means of coupons printed in county and state papers. Another subcommittee was appointed to obtain from hospitals over the state information concerning the number of diabetic patients admitted for treatment during 1946. The committee is composed of Drs. William M. Sheppe, Wheeling, chairman; L. Rush Lambert, Fairmont; William A. Thornehill Jr., Charleston; Richard C. Neale, Bluefield, and Frederick Q. Whittlesey, Morgantown.

Health Conference.—The Annual Health Conference, which is a joint meeting of the West Virginia Public Health Association and the Health Officers Conference, will be held at the Stonewall Jackson Hotel, Clarksburg, May 16-17. The conference will open at 9 a. m. Friday, May 16. The first address will be by Ross Techemeyer, executive secretary, Public Employees' Retirement Fund, Indianapolis, on "Retirement Systems in the State of Indiana." He will be followed by Ralph Barnes, Atlanta, Ga., on "Rodent Control." The morning session will end with an address by Dr. Bruno Gebhard, director, Cleveland Health Museum, whose subject is "Seeing is Believing and Relieving." The remainder of the program follows:

Film "Clean Water."
Dr. Richard K. Anderson, New York, "Recent Studies in Nutrition as Applied to Public Health."
Dr. Oswald F. Hedley, Richmond, Va., "Newer Drugs in the Control of Tuberculosis."
Gertrude M. Church, Washington, D. C., "The Influence of the Public Health Nurse in the Community."
Dr. William F. McAnally, Pittsburgh, "Medicine and Hygiene in Industry."
Dr. Andrew P. Sackett, Charleston, "Method and Administration of Rapid Treatment."
Dr. Isabel Morgan, Charleston, "The Need for Prenatal and Well Baby Clinics in West Virginia."

Section group meetings will be held as follows: health officers, Dr. Leon A. Dickerson, Madison, W. Va., presiding; public health nurses, Miss Hattie Samples presiding; sanitary engineers and sanitarians, C. O. Snyder presiding and clerks, Paul Shanks presiding. The annual banquet will be held at the Stonewall Jackson Hotel Saturday evening.

GENERAL

Meeting of Bacteriologists.—The Society of American Bacteriologists will meet May 13-16 at the Bellevue-Stratford Hotel, Philadelphia. Six sessions will be devoted to medical bacteriology, pathogenesis on Tuesday afternoon, viruses on Wednesday morning, tuberculosis Wednesday afternoon, laboratory diagnosis and viruses Thursday afternoon, and immunology Friday afternoon.

International Congress of Nurses.—The 1947 congress of the International Council of Nurses will meet in Convention Hall, Atlantic City, N. J., May 11-16. Nurses from more than thirty countries are expected to attend to discuss such problems as the shortage of nurses and methods of meeting it, nurses' employment conditions and the place of the nurse in socialized medicine. Edith M. Beattie, executive secretary, Graduate Nurses' Association of the District of Columbia, Washington, D. C., is secretary of local arrangements.

New Society of Maxillofacial Surgeons.—At a meeting Feb. 13 in Chicago the newly organized American Society of Maxillo-Facial Surgeons elected Dr. Carl W. Waldron, Minneapolis, president, Dr. John W. Kemper, Ann Arbor, Mich., vice president, and Dr. Casper M. Epsteen, Chicago, secretary-treasurer. Membership in the society may be secured by invitation only for doctors of both medicine and dental surgery. The society will hold its first annual meeting in conjunction with the annual session of the American Medical Association in Atlantic City.

Study of Nursing Education.—The National Nursing Council, representing fourteen professional organizations, is undertaking an intensive study of the registered nurse's real job and the changes in education that she requires for it. The study is being financed by a grant from the Carnegie Corporation of New York under Esther Brown, director, department of studies in the professions, Russell Sage Foundation. The study will focus on how a basic professional nursing school should be organized, administered, controlled and financially supported to prepare its graduates adequately to meet community needs.

Aids in European Relief.—Dr. Abraham U. Neuwirth, Floral Park, N. Y., former medical adviser to the Iranian government, left April 17 for Europe, where he will assume the position of regional medical officer in the Joint Distribution Committee's public health program in behalf of the Jews of Europe. The committee has established a series of medical and health programs in Europe including the maintenance of more than 155 hospitals, clinics, dispensaries and maternity centers on the continent. Dr. Neuwirth, a graduate of Bellevue Medical College, New York, serving with the U. S. Army Medical Corps during the war, was attached to the Iranian government, where he supervised the vaccination of the army and civilians against typhus in 1942.

Annual Meeting of American Psychiatric Association.—This association will hold its annual meeting May 19-23 at the Pennsylvania Hotel, New York. Among the 120 papers to be presented are reports on advances in child psychiatry, brain surgery, convulsive disorders, shock therapy, alcoholism and forensic psychiatry. Among the speakers will be:

Dr. G. Brock Chisholm, Ottawa, Canada, The Future of Psychiatry.
Dr. Paul R. Hawley, Washington, Role of Motivation in Recovery from Medical, Surgical and Psychiatric Illnesses.
Pierre S. du Pont 3d, Wilmington, Del., The Psychiatric Foundation and Its Role in Public Education.
Dr. Robert H. Felix, Washington, D. C., The U. S. Public Health Service Program for the Development of Training, Research and Community Service in Mental Health.
Dr. William C. Menninger, Topeka, Kan., The Role of Psychiatry in the World Today.

Other speakers include Dr. Karl M. Bowman, head of the Langley Porter Clinic, San Francisco; Dr. Alan Gregg, director of the Division of Medical Science, Rockefeller Foundation, New York, and Major Gen. Howard McC. Snyder, Washington, D. C.

Marriages

RAYMOND MERCHANT, Crown Point, Ind., to Miss Shirley Irene Hambidge of Lafayette February 1.

WILLIAM VINCENT RUCKER, Bedford, Va., to Mrs. Emilie McClain Warnock of Philadelphia in November 1946.

MARLIN H. POINDEXTER JR., Chillicothe, Ohio, to Miss Margaret Coughlin in Detroit Oct. 19, 1946.

DALE S. RAINES to Miss Sarah Siebenmorgan, both of Terre Haute, Ind., January 11.

Deaths

Thomas Hall Shastid ● Duluth, Minn., born in Pittsfield, Ill., July 19, 1866; University of Vermont College of Medicine, Burlington, 1888; specialist certified by the American Board of Ophthalmology; fellow of the American Academy of Ophthalmology and Otolaryngology, American Academy of Medicine, American Medico-Legal and Toxicologic Society, American College of Surgeons and the American College of Physicians; associate member of the American Museum of Natural History; member of the American Association for the Advancement of Science, World Calendar Association, National Society for Prevention of Blindness, History of Science Society and many others, including honorary memberships; in 1922 member of the International Congress of Ophthalmology in Washington; served as professor of history of medicine and later honorary professor at the American Medical College in St. Louis; visiting ophthalmologist at St. Luke's Hospital; consulting ophthalmologist, St. Mary's and Miller Memorial Hospital in Duluth and St. Mary's Hospital in Superior, Wis.; author of "Country Doctor," collaborator with Dr. Howard A. Kelly on Cyclopedia of American Medical Biography and American Medical Biographies, with Dr. James Moores Ball on Modern Ophthalmology, third, fourth, fifth and sixth editions, and with Dr. Conrad Berens, The Eye and Its Diseases; formerly editorial secretary of the *Ophthalmic Record;* at one time associate editor of the *Michigan Law Review;* collaborator, *American Journal of Ophthalmology;* member of the editorial staff of *Eugenics;* awarded honorary Doctor of Science degree by the University of Wisconsin; died February 15, aged 80, of uremia.

Bertram Harrington Buxton ● Providence, R. I.; born in Worcester, Mass., in 1883; Harvard Medical School, Boston, 1908; professor of clinical obstetrics at the Tufts College Medical School; specialist certified by the American Board of Obstetrics and Gynecology, Inc.; member and past president of the New England Obstetrical and Gynecological Society; fellow of the American College of Surgeons; member of the American Association of Obstetricians, Gynecologists and Abdominal Surgeons; served as a first lieutenant in the Rhode Island National Guard, on the Mexican Border and with the American Expeditionary Forces overseas during World War I; received the Purple Heart and the Silver Star with Palm for gallantry in action; lieutenant colonel, medical reserve corps, not on active duty; for many years chief of staff, Providence Lying-In Hospital; at various times on the staffs of the Rhode Island, Charles V. Chapin and Butler hospitals; died February 9, aged 63, of coronary thrombosis.

Luis B. de la Vega, San Juan, Puerto Rico; College of Physicians and Surgeons, Baltimore, 1914; member of the American Medical Association; served as secretary of the Insular Board of Health and as president of the Puerto Rico Medical Association; formerly director of the Women's Hospital of Arecibo and the Maternity and Children's Hospital; a major in the medical corps of the Puerto Rico National Guard; on May 3, 1941 became lieutenant colonel in the Army of the United States, serving as assistant director of the U. S. Selective Service Board for Puerto Rico during World War II; died at Fort Brooke Hospital February 9, aged 58, of cerebral hemorrhage.

Harlan Page Abbott ● Providence, R. I.; Harvard Medical School, Boston, 1889; an Affiliate Fellow of the American Medical Association; specialist certified by the American Board of Otolaryngology; fellow of the American College of Surgeons; past president of the Rhode Island Ophthalmological and Otological Society and vice president of the New England Otological and Laryngological Society; veteran of the Spanish-American War; for many years affiliated with the Memorial Hospital in Pawtucket and the Rhode Island Hospital, where he died February 2, aged 86, of carcinoma of the prostate.

Henry Victor Adix Sr., Gresham, Ore.; University of Oregon Medical School, Portland, 1907; member of the American Medical Association; died February 8, aged 73, of coronary thrombosis.

Otto Walter Aichele, Philadelphia; Jefferson Medical College of Philadelphia, 1911; died February 7, aged 59, of pulmonary carcinoma.

Howard Wilson Barker, New York; National University Medical Department, Washington, D. C., 1901; member of the American Medical Association and the Medical Society of the District of Columbia; served during World War I; formerly surgeon in the U. S. Public Health Service reserve; colonel, medical reserve corps, not on active duty; died in the Roosevelt Hospital February 19, aged 72, of acute appendicitis.

Chancey Lee Brittell ● Chariton, Iowa; State University of Iowa College of Medicine, Iowa City, 1907; served as county physician and county coroner; on the staff of St. Joseph's Hospital, Ottumwa; died February 15, aged 64, of coronary sclerosis.

Elizabeth Viola B. Burns, Fort Wayne, Ind.; College of Physicians and Surgeons of Chicago, School of Medicine of the University of Illinois, 1902; member of the American Medical Association; died February 23, aged 78, of arteriosclerosis.

Joseph Calvary, Chicago; Ludwig-Maximilians-Universität Medizinische Fakultät, Munich, Bavaria, Germany, 1905; member of the American Medical Association; died in February, aged 66.

Charles Samuel Campbell ● Coffeyville, Kan.; Rush Medical College, Chicago, 1902; fellow of the American College of Surgeons; surgeon, Southeast Kansas Hospital; died February 8, aged 68, of coronary occlusion.

Joseph Dessauer, Newark, N. J.; Julius-Maximilians-Universität Medizinische Fakultät, Würzburg, Bavaria, Germany, 1914; member of the American Medical Association; died recently, aged 59.

Charles Justice Ellis, Pittsburgh; Western Pennsylvania Medical College, Pittsburgh, 1901; member of the American Medical Association; for many years county jail physician; died February 16, aged 69, of coronary thrombosis.

William D. Freeman, Mount Ida, Ark.; University of Arkansas School of Medicine, Little Rock, 1899; served on the Selective Service Board during World War I; served as county health officer; member of the American Medical Association; died in the Methodist Hospital, Hot Springs, February 3, aged 83, of pneumonia.

Daniel S. Goble, Indianapolis; Kentucky School of Medicine, Louisville, 1892; died in the Methodist Hospital February 6, aged 77, of bronchogenic carcinoma.

Eugene Oscar Koeneman ● Eldora, Iowa; College of Physicians and Surgeons of Chicago, School of Medicine of the University of Illinois, 1899; affiliated with the Eldora Memorial Hospital; died in Amboy, Calif., January 8, aged 77, when an automobile in which he was driving was struck by a train.

Henry Bennett Lavery ● Lieutenant Colonel, U. S. Army, retired, Dubuque, Iowa; St. Louis University School of Medicine, 1926; U. S. Army Medical School and Medical Field Service School in 1928; School of Aviation Medicine in 1932; member of the Louisiana State Medical Society; entered the medical corps of the U. S. Army as a first lieutenant in August 1927; promoted through the various ranks to that of lieutenant colonel; retired Oct. 31, 1945 for disability in line of duty; died Dec. 3, 1946, aged 46.

Robert Lawrence Mason, Roanoke, Va.; Medical College of Virginia, Richmond, 1915; member of the American Medical Association; served on the staff of the Shenandoah Hospital; died January 15, aged 60, of chronic nephritis with arteriosclerosis.

James Thomas Nichols ● Muskogee, Okla.; Denver and Gross College of Medicine, 1903; served during World War I; formerly city physician; on the staffs of the Oklahoma Baptist Hospital and the Muskogee General Hospital, where he died January 26, aged 68, of cerebral hemorrhage.

Ora Frank Parish ● Grinnell, Iowa; Rush Medical College, Chicago, 1903; an Affiliate Fellow of the American Medical Association; fellow of the American College of Surgeons; served during World War I; on the staff of the Community Hospital, where he died February 16, aged 73, of carcinoma of the spleen.

William Henry Rogers ● Brooklyn; Long Island College Hospital, Brooklyn, 1905; specialist certified by the American Board of Otolaryngology; fellow of the American College of Surgeons; on the staff of the Brooklyn Eye and Ear Hospital; died January 15, aged 72, of heart disease.

Arthur Marion Sparling, Sailor Springs, Ill.; Washington University School of Medicine, St. Louis, 1907; member of the American Medical Association; died in St. Anthony's Hospital, Effingham, February 7, aged 70, of cerebral hemorrhage.

Ray Henry Thomas ● South Bend, Ind.; Indiana University School of Medicine, Indianapolis, 1914; at one time a past assistant surgeon in the U. S. Public Health Service reserve; died in Warsaw, Ind., recently, aged 58, of coronary thrombosis.

John Henry Thomsen ● Omaha; John A. Creighton Medical College, Omaha, 1914; died in the Frederick Hospital January 21, aged 62, of cerebral hemorrhage due to hypertension.

Lucian N. Yost, Fairmont, W. Va.; Eclectic Medical Institute, Cincinnati, 1895; served as county health officer and county physician; died in the Fairmont Emergency Hospital February 4, aged 75, of cerebral hemorrhage.

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Foreign Letters

BRAZIL

(From Our Regular Correspondent)

SÃO PAULO, April 5, 1947.

The Effects of Curare

In 1944 Dr. Ettore Biocca was present when curare was being prepared by the Makú Indians (a primitive tribe of hunters); the ceremony took place in a *maloca* (Indian house) near a small affluent on the right margin of the Tiquié River adjacent to the Brazil-Colombia border. Samples of the various plants used by the Makú Indians were collected and brought by Biocca to São Paulo, where Hoehne of the Instituto de Botanica identified them. The Makú curare collected by Dr. Biocca in five different places (rivers Tiquié, Papori and Uaupés) had an average biologic activity per gram of about 7,000 minimum lethal doses for mice, inoculated intramuscularly. No curarizing effect could be demonstrated in the residue of the ethereal extract of the same curare (corresponding to 0.29 per cent of dry curare weight). The curarizing activity of chloroformic residue (0.45 per cent of dry curare weight) was about three times weaker than that of dry curare, while the curarizing activity of non-extractable bases, by ether or chloroform (11.41 per cent) was about four times stronger than that of dry curare.

Preliminary experiments were conducted with H. Stammreich of the Instituto de Fisica of St. Paul University subjecting curare solutions to radiation and controlling the curarizing activity of these solutions before and after irradiation. The curare solutions were practically inactivated only by the short ultraviolet region of the spectrum. For this reason a glass filter of Pyrex, which absorbs this region and transmits only waves above 3,200 angstroms, prevented the whole photochemical reaction. Waves between 2,500 and 3,000 angstroms roused a series of photochemical reactions which began apparently by small molecular alterations followed by a large decrease or total loss of curarizing power. Repeated intravenous injection of solution of Makú curare in rabbits did not cause either precipitins or specific antibodies to appear in the serum of these animals capable of complement fixation or of neutralizing the curarizing power of the solutions. In the same manner it was impossible to demonstrate in the rabbits subjected to these experiments any increase of resistance to curare poisoning. Makú curare seems therefore to lack any immunizing activity.

Blindness Caused by Intracranial Cysticercosis

Cysticercosis of the brain, like most intracranial lesions, may cause focal or general symptoms; nevertheless it often goes unrecognized. Only when focal symptoms are clearcut and the general ones point strongly to visual disturbance is its presence really suspected. In massive infection of a few weeks or months duration the complement fixation test for cysticercosis gives a strongly positive reaction. In a series of 312 necropsies done by Dr. João Montenegro in the Faculdade de Medicina de São Paulo between 1923 and 1927 cysticerci of the brain and meninges were found in 2.54 per cent of the cases. Dr. Montenegro also presented the clinical observations in 4 cases of endocranial cysticercosis with lesions of the optic chambers. The diagnosis was made by x-rays, by the complement fixation test for cysticercosis in the spinal fluid, by the cell count and by the albumin content. The Wassermann reaction for syphilis was negative in all. One patient was operated on and eight cysticerci were removed; one was examined post mortem. Two brothers of 1 of the patients probably had the same disease because the symptoms were the same. That would make a total of 6 clinical cases. The treatment consists in brain decompression, when there is intracranial hypertension, in order to save sight and sometimes life, according to Dr. Montenegro's account. Well localized cysticerci may be removed. Conservative treatment consists mainly in the administration of sedatives. Vermicides as well as radiotherapy have not proved to be of any value; improvement in a few patients thus treated might have been spontaneous.

TURKEY

(From Our Regular Correspondent)

ANKARA, Feb. 15, 1947.

The Health of the Worker in Turkey

So far the Ministry of Health and Social Assistance has been responsible for maintaining the health of the worker. The public health law of 1929 called for the enactment of a worker's health and insurance law. The labor law was enacted in 1936. A labor office was then established at the Ministry of Economics, and all matters pertaining to industry and workers came under the administration of the government. With the establishment of the Ministry of Labor in 1945 the labor office at the ministry of economics became part of the Ministry of Labor, which like all other ministries has its own budget, a council, an under secretary of state, general directors and district inspectors. Under present conditions labor departments can be established in only fifteen localities. The responsibility for the health of the worker is now in the hands of the labor minister, Prof. Dr. Sadi Irmak. The new minister made an inspection tour to ascertain under what condition the workers work and live. Statistics show that from 70 to 75 per cent of Turkey's population is engaged in agriculture. Handicrafts and trades followed are those of goldsmith and silversmith, cloth and carpet weaving, cocoon and silk production, soapmaking, tanning and horseshoeing. The republic has added mineral mining, iron smelting, the making of railway rails, spinning, cloth mills and sugar refineries, thus making a beginning at industrialization. Most of these industries are in the hands of the government, employing about 100,000 workers, the majority unskilled. The old established military factories are still in operation.

The workers' health and compensation law contains 148 paragraphs, of which twelve relate to matters of health and safety precautions, eighteen to strikes and lockouts, which are unlawful, and to disagreements between employer and employed. There are regulations to safeguard the right of the workers in regard to industrial diseases, maternity and old age insurance, unemployment, illness and death compensation.

Establishments employing more than fifty workers must have a physician on the staff, those employing more than a hundred must have an infirmary and those employing more than five hundred must have their own hospital.

Handicrafts and trades are mostly found in small townships, heavy industry away from towns. There are not more than 100,000 skilled workers in Turkey. They are working in coal, chrome, copper, iron, mineral, lead and sulfur mines, in steel works, sugar refineries, tanneries, glass factories and spinning and cotton mills. Carpet and rug weaving is mostly done on handlooms in the homes of villagers. Munition production and military repair work are carried out in military factories, which are under the administration of the Ministry of National Defense. Workmen in railway repairshops and shipyards and dockworkers come under the same administration.

Correspondence

USE OF TESTOSTERONE IN ELDERLY MEN

To the Editor:—The following facts are well known and recognized: (1) Orchiectomy, by diminishing the amount of androgen, inhibits the growth of carcinoma of the prostate; (2) the administration of estrogen, by counteracting the action of androgen, inhibits the growth of carcinoma of the prostate; (3) the diagnosis of early carcinoma of the prostate is difficult and unreliable and cannot depend on rectal palpation alone, and (4) competent pathologists have found lesions which they believe to be carcinoma of the prostate in as high as 46 per cent of all autopsies performed on men of advanced years.

The following assumption is fully justified in the present state of our knowledge: The administration of androgen would probably stimulate and hasten the growth of carcinoma of the prostate.

The following hypothesis is an obvious one, and its implications are so serious that they cannot be disregarded: The administration of testosterone may bring about the onset of cancer in precancerous lesions of the prostate or even cause the development of carcinoma of the prostate de novo.

In view of these considerations, the most emphatic warning should be voiced concerning the current recommended and extensively used procedure of administering large doses of testosterone over long periods of time to elderly men, for a wide range of complaints, without any objective evidence of androgen deficiency or any real certainty that carcinoma of the prostate is not present.

I am informed that similar warnings are being put forward as to the use of estrogen in women. The principle is the same, and the dangers are similar in the two sexes.

DAVID M. DAVIS, M.D., Philadelphia.

EUPHEMISMS IN MEDICAL PRACTICE

To the Editor:—The article on "Euphemisms and Equivalents in Teaching Practice," page 183, January 18, gently and thoughtfully points to certain weaknesses in clinical teaching. The author has presented helpful suggestions, but one wonders if he may not be too optimistic in his suggested treatment. He has advocated the use of euphemisms in discussing a patient's illness, although he apparently has in mind not so much euphemisms as synonyms, so chosen as to be unintelligible to the patient. Were such a treatment to succeed it would presuppose two capacities in the attending physician: (1) a remarkable acquaintance with the language in order to have a wide selection of synonyms at his disposal and (2) a rare intuitive insight into the patient's education and understanding, for without that he would not be able to select a synonym unintelligible to the patient.

From the author's article I am inclined to believe that he himself could make such an approach work, but I think he is sanguine in his assumption that students could be readily taught to make it work. Would not his laudable purposes be more surely realized by the following changes: 1. The patient's history and the discussion of his diagnosis and prognosis should be presented in the absence of the patient. Such a procedure would involve but little additional time on the part of the teaching physician, and the respect that it would show for the patient's personality would have significant pedagogic value. Under such a system the student would be less likely to refer to older and chronically ill charity patients as "old crocks," a term not infrequently heard in charity hospitals and one which best serves to indict the student for the inadequacy of his educational experience. This inadequacy can be corrected only by men with broader humanitarian interests. Such interests in the attending physicians would have greater effect if the teaching routine were arranged in a manner better calculated to reveal them. 2. All comments and observations at the bedside should be confined purely to a description of the sensible findings. Even in that description the use of synonyms, as the author of the article recommended, would be helpful. The average patient is probably less disturbed to hear he has a tachycardia than to be informed he has a fast heart. Such a teaching method would give the patient the impression that the student was primarily interested in how he felt and in what evidences of illness he had. The student would be rewarded by a better cooperation from the patient when he wished to carry out his examination. The system just outlined is rarely practiced, partly, no doubt, because the type of patient it would help does not publish his views in the scientific journals.

Were a well trained reporter to question some of these patients concerning their views on teaching methods, student treatment and the like he would not only be able to create a story of exceptional human interest but thereby would at once help these patients and contribute to the education of future physicians.

BRADFORD N. CRAVER, M.D., Summit, N. J.

TREATMENT OF POSTHERPETIC PAIN

To the Editor:—In Queries and Minor Notes in THE JOURNAL, March 8, page 733, there was an answer to an inquiry on the treatment of postherpetic pain. To the five measures of medical therapy recommended in the answer "before radical therapy is advised," the following are worthy of being added: (1) intravenous injections of Endoarsan of Endo Products Inc., Richmond Hill 18, New York, (2) Gynergen, (3) autoserum injections, (4) smallpox vaccine and (5) high voltage x-ray irradiation of the corresponding segments. Further information about treatment of postherpetic pain can be found in the following articles, which contain extensive bibliographies:

Baird, P. C., Jr.: Herpes Zoster, *New England J. Med.* **228**: 568 (May 6) 1943.

Edgerton, A. E.: Herpes Zoster Ophthalmicus, *Arch. Ophth.* **34**: 40 (July), 114 (Aug.) 1945.

The answer concludes "If these measures fail, the patient should be referred to a neurologic surgeon, who may do a root resection on the side of the involved area." Though many textbooks take the same attitude, it must be stressed that, when medical measures fail, the treatment of herpes zoster with paravertebral procaine injection should be tried before operations such as posterior root resection or chordotomy are considered. The following articles give information about the technic of these injections:

Freude, E.: Zur Behandlung des Herpes zoster, *München. med. Wchnschr.* **78**: 1617, 1931.

Rosenak, S.: Procaine Injection Treatment of Herpes Zoster, *Lancet* **2**: 1056 (Nov. 5) 1938.

Street, A.: Use of Sympathetic Nerve Block in Herpes Zoster, Bell's Palsy, *Mississippi Doctor* **20**: 480 (April) 1943.

Findlay, Thomas, and Patzer, Reynold: The Treatment of Herpes Zoster by Paravertebral Procaine Block, THE JOURNAL, Aug. 25, 1945, p. 1217.

In the latest publication on the subject of the treatment of herpes zoster (Reeves, R. J., and Waters, L. B.: Herpes Zoster, *Texas State J. Med.* **42**: 490 [Dec.] 1946) the authors conclude that "roentgen therapy is an effective method of treatment in herpes zoster. . . . The combination of procaine injection and irradiation sounds feasible." Paravertebral injections with procaine give such good results that it is hardly necessary to resort to alcohol injections as recommended by F. Mandl (*Wien. klin. Wchnschr.* **48**: 490, 1935) and others.

ROBERT WARTENBERG, M.D., San Francisco.

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Medical Examinations and Licensure

COMING EXAMINATIONS AND MEETINGS

NATIONAL BOARD OF MEDICAL EXAMINERS
EXAMINING BOARDS IN SPECIALTIES

Examinations of the National Board of Medical Examiners and the Examining Boards in Specialties were published in THE JOURNAL, April 26, page 1302.

BOARDS OF MEDICAL EXAMINERS

ALABAMA: Montgomery, June 24-26. Sec., Dr. D. G. Gill, 519 Dexter Ave., Montgomery 4.

ARKANSAS: * *Medical. Examination.* June 5-6. Sec., Medical Board of the Arkansas Medical Society, Dr. L. J. Kosminsky, Texarkana. *Eclectic.* Little Rock, June 5. Sec., Dr. C. H. Young, 1415 Main St., Little Rock.

CALIFORNIA: *Written.* San Francisco, July 7-10. *Oral.* San Francisco, May 10-11. *Oral Clinical Examination for Foreign Medical Graduates.* San Francisco, June 21. Sec., Dr. Frederick N. Scatena, 1020 N. St., Sacramento 14.

CONNECTICUT: *Examination.* Hartford, July 8-9. Sec., Dr. Creighton Barker, 258 Church St., New Haven. *Homeopathic.* Derby, July 8. Sec., Dr. Joseph H. Evans, 1488 Chapel St., New Haven.

DELAWARE: *Examination.* Dover, July 8-10. *Endorsement.* Dover, July 15. Sec., Medical Council of Delaware, Dr. J. S. McDaniel, 229 S. State St., Dover.

DISTRICT OF COLUMBIA: * *Reciprocity.* Washington, June 9. Sec., Commission on Licensure, Dr. George C. Ruhland, 6012 E. Municipal Bldg., Washington 1.

FLORIDA: * *Examination.* Jacksonville, June 24-25. Sec., Dr. Harold D. Van Schaick, 2736 S. W. Seventh Ave., Miami 36.

GEORGIA: Atlanta, Oct. 14-16. Sec., Mr. R. C. Coleman, 111 State Capitol, Atlanta 3.

HAWAII: *Examination.* Honolulu, July 8-11. Sec., Dr. S. E. Doolittle, 881 S. Hotel St., Honolulu 53.

IDAHO: Boise, July 14-16. Sec., Bureau of Occupational Licenses, Dr. S. M. Poindexter Eastman Bldg., Boise.

INDIANA: *Examination.* Indianapolis, June. Exec. Sec., Board of Medical Registration and Examination, Miss Ruth V. Kirk, 627 K. of P. Bldg., Indianapolis.

KANSAS: *Endorsement.* Kansas City, June 26. Sec., Board of Medical Registration and Examination, Dr. J. F. Hassig, 905 N. Seventh St., Kansas City 10.

KENTUCKY: *Examination.* Louisville, Sept. 22-24. Sec., State Board of Health, Dr. P. E. Blackerby, 620 S. Third St., Louisville 2.

MAINE: Augusta, July 1-2. Sec., Board of Registration in Medicine, Dr. Adam P. Leighton, 192 State St., Portland.

MARYLAND: *Medical Examination.* Baltimore, June 17-20. Sec., Dr. E. H. Kloman, 1215 Cathedral St., Baltimore. *Homeopathic.* Baltimore, June 10-11. Sec., Dr. J. A. Evans, 612 W. 40th St., Baltimore.

MASSACHUSETTS: *Examination.* Boston, July 8-11. Sec., Board of Registration in Medicine, Dr. H. Q. Gallupe, 413 E State House, Boston.

MICHIGAN: * *Examination.* Detroit, June 9-11. Semi-Annual meeting, Lansing, June 24. Sec., Board of Registration in Medicine, Dr. J. E. McIntyre, 100 W. Allegan St., Lansing 8.

MISSISSIPPI: Jackson, June 23-24. Asst. Sec., State Board of Health, Dr. R. N. Whitfield, Jackson 113.

MISSOURI: *Examination.* St. Louis, May 26-28 and June 9-11. Exec. Sec., Mr. John A. Hailey, Box 4, State Capitol Building, Jefferson City.

NEBRASKA: * *Examination.* Omaha, June. Dir., Bureau of Examining Boards, Mr. Oscar F. Humble, State Capitol Bldg., Lincoln.

NEVADA: *Written Examination.* Carson City, May 5. Sec., Dr. G. H. Ross, 215 N. Carson St., Carson City.

NEW HAMPSHIRE: *Examination.* Concord, Sept. 11-12. Sec., Board of Registration in Medicine, Dr. John S. Wheeler, 107 State House, Concord.

NEW JERSEY: Trenton, June 17-18. Sec., Dr. E. S. Hallinger, 28 W. State St., Trenton.

NEW YORK: *Examination.* Albany, Buffalo, New York and Syracuse, June 23-26. Sec., Dr. Jacob L. Lochner Jr., State Education Bldg., Albany.

NORTH CAROLINA: *Endorsement.* Raleigh, June 24. *Examination.* Raleigh, June 23-26. Acting Sec., Mrs. L. McNeill, 226 Hillsboro St., Raleigh.

NORTH DAKOTA: Grand Forks, July 1-4. Sec., Dr. G. M. Williamson, 415 S. Third St., Grand Forks.

OHIO: *Examination.* Columbus, June 17-20. Sec., Dr. H. M. Platter, 21 W. Broad St., Columbus.

OREGON: * *Examination.* Portland, May 21-23. Application must be on file on or before May 12. Exec. Sec., Miss L. M. Conkey, 608 Failing Bldg., Portland 4.

PENNSYLVANIA: Philadelphia and Pittsburgh, July. Acting Sec., Bureau of Professional Licensing, Department of Public Instruction, Mrs. M. G. Steiner, 351 Education Bldg., Harrisburg.

SOUTH CAROLINA: Columbia, June 23-25. Sec., Dr. N. B. Heyward, 1329 Blanding St., Columbia.

SOUTH DAKOTA: * Pierre, July 15-16. Sec., Medical Licensure, State Board of Health, Dr. Gilbert Cottam, Capitol Bldg., Pierre.

TENNESSEE: Memphis and Nashville, June 11-12. Sec., Dr. Harley W. Qualls, 1633 Exchange Bldg., 130 Madison Ave., Memphis 3.

TEXAS: Austin, June 5-7. Sec., Dr. T. J. Crowe, 918-20 Texas Bank Building, Dallas 2.

VIRGINIA: Richmond, June 18-21. Sec., Dr. K. D. Graves, 306 Medical Arts Bldg., 20½ Franklin Rd., Roanoke.

WYOMING: *Examination.* Cheyenne, June 2. Sec., Dr. G. M. Anderson, Capitol Bldg., Cheyenne.

* Basic Science Certificate required.

BOARDS OF EXAMINERS IN THE BASIC SCIENCES

ARIZONA: June 17. Sec., Mr. Francis A. Roy, Science Hall, University of Arizona, Tucson.

ARKANSAS: Little Rock, May 7. Sec., Mr. L. E. Gebauer, 701 Main Street, Little Rock.

COLORADO: Denver, June 4-5. Sec., Dr. Esther B. Starks, 1459 Ogden Street, Denver.

CONNECTICUT: June 14. Exec. Asst., State Board of Healing Arts, Mr. W. G. Reynolds, 250 Church St., New Haven 10.

FLORIDA: May 31. Final date for filing application is May 16. Sec., Dr. M. W. Emmel, University of Florida, Gainesville.

IOWA: Des Moines, July 8. Sec., Dr. Ben H. Peterson, Coe College, Cedar Rapids.

MICHIGAN: Ann Arbor and Detroit, May 9-10. Sec., Miss Eloise Lebeau, 101 N. Walnut St., Lansing.

NEBRASKA: Omaha, May 6-7. Dir., Bureau of Examining Boards, State Department of Health, Mr. O. F. Humble, 1009 State Capitol Bldg., Lincoln 9.

NEW MEXICO: *Examination.* Santa Fe, May 4. Sec., Miss Marion M. Rhea, 114 E. Marcy St., Santa Fe.

OREGON: June 7. Final date for filing application is May 21. Sec., Mr. C. D. Byrne, University of Oregon, Eugene.

RHODE ISLAND: *Examination.* Providence, May 14. Chief, Division of Professional Regulation, Mr. Thomas B. Casey, 366 State Office Bldg., Providence.

SOUTH DAKOTA: Vermillion, June 6-7. Sec., Dr. G. M. Evans, 310 E. 15th St., Yankton.

TENNESSEE: *Examination.* Nashville and Memphis, June 13-14. Sec., Dr. O. W. Hyman, 874 Union Ave., Memphis.

Council on Medical Education and Hospitals

HOSPITAL STAFF APPOINTMENTS

At the direction of the House of Delegates of the American Medical Association some years ago the Council on Medical Education and Hospitals formulated standards for the establishment of American boards for the certification of specialists and for the conduct of hospital residencies providing training in the various special fields of medicine. The aim was to improve the quality of training at this level of medical education. The physician responsible for directing such hospital training should himself have had training and experience approximately equivalent to that required of certification applicants, whether or not he is actually certified. But it was never intended that staff appointments in hospitals generally, or even in hospitals approved for residencies, should be limited to board certified physicians, as is now the policy in some hospitals. Such policies, if practiced extensively, are detrimental to the health of the people and therefore to American medicine. Hospital staff appointments should depend on the qualifications of physicians to render proper care to hospitalized patients, as judged by the professional staff of the hospital, and not on certification or special society memberships.

In this opinion the Council has the full concurrence of the Advisory Board for Medical Specialties, which represents all the American boards in the specialties. At the February 1947 meetings of the Advisory Board it was unanimously voted to adopt as the sentiment and policy of the Advisory Board the recent resolution passed by the American Board of Surgery, which reads:

> The American Board of Surgery is not concerned with measures that might gain special privileges or recognition for its certificants in the practice of surgery. It is neither the intent nor has it been the purpose of the Board to define requirements for membership on the staffs of hospitals. The prime object of the Board is to pass judgment on the education and training of broadly competent and responsible surgeons —not who shall or shall not perform surgical operations. The Board specifically disclaims interest in or recognition of differential emoluments that may be based on certification.

Since February, several separate American boards in the various specialties have taken similar action. The Council on Medical Education and Hospitals of the American Medical Association is completely in accord with this principle.

Bureau of Legal Medicine and Legislation

MEDICOLEGAL ABSTRACTS

Food, Drug and Cosmetic Act: Right of Government To Seize Misbranded Device.—The claimant purchased a Spectro-Chrome for the use of himself and his mother. In proceedings against the manufacturer, the government had obtained a judgment that the machine was fraudulent and, because this machine was shipped in interstate commerce, the government now claims the right to take it from the claimant even though he bought and paid for it and is using it in his home. The case was heard in the United States district court, D., Oregon.

It was stipulated that the device was shipped in interstate commerce, labeled with false and misleading statements as to its therapeutic capabilities. Regardless of this, however, the owner testified that he was satisfied with the machine and wanted to keep it, and that he and his mother had both obtained help by using it. He testified further that he did not intend to make commercial use of the machine, did not intend to permit it to be used outside his home or by others than his immediate family, which consisted of his parents and two brothers, both over 21 years of age and both having received a grammar and high school education similar to that of the defendant. The government relied on the words of the statute, that an article introduced into interstate commerce, with fraudulent representations as to its therapeutic value, may be seized and condemned "while in interstate commerce, or at any time thereafter. . . ." The government contended that the words "or at any time thereafter" permitted it to pursue and seize the article in a private home. The court quoted from the book of Constitutional Limitations, ed. 7, page 425, as follows:

> Near in importance to exemption from any arbitrary control of the person is that maxim of the common law which secures to the citizen immunity in his home against the prying eyes of the government, and protection in person, property, and papers against even the process of the law, except in a few specified cases. . . .

This case, said the court, is not one of such exceptions. It is nothing more than a well intentioned effort by high-minded and zealous officials to protect a man from what they deem to be folly, to the extent of following him into his home and family and there divesting him of property. This, insisted the court, cannot be done. The government admitted that the Spectro-Chrome is not inherently dangerous, but it said in its brief:

> It is claimed to be indirecly dangerous because the ailment of the user is aggravated by reason of the failure to consult competent medical authority.

This statement is not supported by any legal authority. The question, said the court, is not whether false and misleading statements were made to the claimant. The question is what does the claimant want to do about it? He says "Nothing. I am satisfied. I am being helped." But the government answers "We won't allow you to be satisfied. We won't allow you to help yourself. We know that you *may* be led into doing yourself harm, through relying too heavily on this machine, and thus not obtaining proper (by our standards) medical treatment." Without intending to give offense, the court concluded, I think no such proposition of paternal right in the field of public health has been advanced in modern times. At least I have been unable to find it in encyclopedias, treatises or law books. The judgment was therefore in favor of the claimant, and the government was denied the right to seize and condemn the machine.—*United States v. One Article of Device Labeled Spectro-Chrome, 66 F. Supp. 754 (Ore., 1946).*

Malpractice: Physician's Liability for Burns Received During Operation.—The plaintiff sued for damages caused by the alleged malpractice of the defendant physician. From a directed verdict in favor of the defendant, the plaintiff appealed to the Supreme Judicial Court of Massachusetts.

The plaintiff engaged the defendant, an obstetrician, to treat her before, during and after childbirth. About 11 p. m. on December 20 the plaintiff, who was in mild labor and three weeks overdue, entered a lying-in hospital in Boston, where the defendant had arranged for her room. The baby, her first and a large one, was born about 2:10 a. m. on December 22. It was a difficult labor of thirty-five hours, and delivery was by the use of forceps after the defendant had performed an operation known as an episiotomy. About twelve minutes after anesthesia had started, in order to sterilize the field of operation, the defendant applied Scott's solution (mercurochrome, distilled water, 95 per cent alcohol and a chemical known as acetone [a solvent which has a tendency to dry up]) to the legs, to the perineum and to an area extending half way from the pubic bone to the umbilicus. During the delivery and operation the plaintiff "was lying on a rubber sheet at the time of delivery; the rubber sheet was put just under her buttocks." The following afternoon the plaintiff told the defendant that her back was sore and burned but the defendant said that was natural and would leave in a few days. There was a similar conversation the following day. On December 24 she told the defendant her back was worse and burning. The defendant then made an examination, which disclosed on each buttock a second degree burn covering in each case an area of approximately 2 by 3 inches. He said "My God, what a mess; my God, what happened here. . . . It is a darn shame to have this happen." He also said that "she had a very hard delivery, and it was a burning shame to get that on top of it, and it was because of negligence when they were upstairs." He thought that apparently it was from the solution being allowed to stay in the part of the "mat" which was recessed from the pressure; and that "the closest he could figure was that the solution was on the rubber mat and exposed her skin for too long a period." At the trial the defendant testified: "She got these burns while in the delivery room. . . . He thought she got the burns at the time of the delivery." In answer to interrogatories the defendant stated that "the plaintiff did receive burns on both her buttocks while she was under his care and treatment" and that there were "no negligent acts or omissions on the part of the plaintiff or by others than the defendant which caused the injuries suffered by the plaintiff."

The plaintiff was not required, said the court, to show the exact cause of her injuries or to exclude all possibility that they resulted without fault on the part of the defendant. It was enough that she showed that the harm which befell her was more likely due to negligence of the defendant than to some other cause for which he was not liable. The jury could have found, continued the court, in accordance with the defendant's admissions, that the plaintiff's injuries were due to negligence; that there was no negligence on the part of the plaintiff or of any one other than the defendant; that, by the process of elimination, this negligence was that of the defendant; and that, in particular, this negligence of the defendant related to the exposure of the plaintiff in the delivery room, while under his direction and care, to a solution on the delivery table which he himself had administered. It is no answer, said the court, to say that the admissions were merely statements of regret, sympathy and benevolence evoked by human suffering. This is, of course, true of the statements that it was a "shame" and "unfortunate." But it is in no way true of the references to "negligence" and to the definite declaration that the burns were attributable to the solution being on the "mat" and to the plaintiff's skin being exposed to the solution "for too long a period."

On the basis of all the evidence the court was of the opinion that the trial court erred in directing a verdict for the defendant. Accordingly the plaintiff's exceptions were sustained.—*Woronka v. Sewall, 69 N. E. (2d) 581 (Mass., 1946).*

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Current Medical Literature

AMERICAN

The Association library lends periodicals to members of the Association and to individual subscribers in continental United States and Canada for a period of three days. Three journals may be borrowed at a time. Periodicals are available from 1937 to date. Requests for issues of earlier date cannot be filled. Requests should be accompanied with stamps to cover postage (6 cents if one and 18 cents if three periodicals are requested). Periodicals published by the American Medical Association are not available for lending but can be supplied on purchase order. Reprints as a rule are the property of authors and can be obtained for permanent possession only from them.

Titles marked with an asterisk (*) are abstracted below.

American J. Digestive Diseases, Fort Wayne, Ind.

14:47-82 (Feb.) 1947

Geography of Salmonella. O. Felsenfeld and Viola Mae Young.—p. 47.
Clinical Consideration of Malfunctioning Noncalculous Gallbladder. M. Feldman.—p. 53.
*Attempt to Prevent Histamine Induced Ulcers in Guinea Pigs with Benadryl (Beta Dimethylaminoethylbenzhydryl Ether Hydrochloride). J. T. Crane, S. Lindsay and M. E. Dailey.—p. 56.
Some Effects of High Lipid Diets on Intestinal Elimination: IV. Saturated Fatty Acids. Helen L. Wikoff, B. H. Marks, Jean F. Caul and W. F. Hoffman.—p. 58.
*Formation of Concretions of Aluminum Salts of Fatty Acids After Use of Aluminum Hydroxide. G. P. Child, W. K. Hall and S. H. Auerbach.—p. 63.
Management of Constipation with Refined Psyllium Combined with Dextrose. L. H. Block.—p. 64.
Cause and Pathogenetic Mechanism of Hypertrophic Cirrhosis of Liver of Hanot Type. A. O. Wilensky.—p. 74.

Benadryl and Histamine Induced Ulcers.—Crane and his associates describe experiments on 16 guinea pigs, which had the aim to determine whether benadryl would prevent the formation of gastric and duodenal ulceration induced by prolonged administration of histamine. Treatment with benadryl did not prevent histamine induced ulcers in guinea pigs.

Concretions of Aluminum Salts of Fatty Acids.—Child and his associates report the history of a man aged 36 who had had chronic duodenal ulcer for fifteen years. Following a severe hemorrhage in March 1945 the patient made an uneventful recovery on a bland diet with atropine and aluminum hydroxide medication. Three months after this hemorrhage and while still taking the antacid and maximum doses of tincture of belladonna he suffered another acute episode of severe pain culminating in hemorrhage. His stools were found to contain small formed white masses. Their passage was accompanied with intermittent periods of constipation and diarrhea, cramps and pain suggesting intestinal irritation. Chemical analysis of these concretions showed them to be composed of fatty acid salts of aluminum, with a small amount of neutral fat and traces of cholesterol and protein. The patient recalled a similar sequence of events with about the same interval between hemorrhages in 1941. At that time the white concretions were not analyzed.

American Journal of Medicine, New York

2:131-228 (Feb.) 1947

Potassium Deficiency in Case of Lymphosarcoma with Sprue Syndrome. H. E. Harrison, Helen C. Harrison, R. R. Tompsett and D. P. Barr.—p. 131.
*Clinical Comparison of Effectiveness of 6-n-Propylthiouracil and 2-Thiouracil as Antithyrotoxic Agents. T. H. McGavack, A. J. Gerl, Mildred Vogel and S. Schutzer.—p. 144.
*Thiouracil: Remission or Relapse of Hyperthyroidism After Discontinuing Its Use. E. C. Bartels.—p. 150.
Brucellosis and Infection Caused by Three Species of Brucella: Clinical, Laboratory and Epidemiological Observations. C. F. Jordan and I. H. Borts.—p. 156.
Relationship of Streptococcal Infections to Rheumatic Fever. H. F. Swift.—p. 168.
Heredity and Rheumatic Disease. May G. Wilson.—p. 190.

Propylthiouracil and Thiouracil as Antithyrotoxic Agents.—McGavack and his associates, in reporting the results of administering propylthiouracil to 100 patients, observe that too little of the drug was given to some of these patients, so that they were subjected to operation or returned to the use of thiouracil. In the 75 patients whose symptoms of toxic goiter were brought fully under control by the drug the symptoms and qualitative therapeutic responses were similar in every regard to those obtained with thiouracil. The initial doses of 6-n-propylthiouracil (propacil) varied between 75 and 250 mg. and maintenance doses from 25 to 75 mg. One severe febrile reaction was encountered in a patient who had previously developed a similar response to thiouracil. Ten of the 75 patients have had no recurrence of thyrotoxic symptoms four months after discontinuing 6-n-propylthiouracil. The drug is safe and effective for the management of all forms of hyperthyroidism.

Hyperthyroidism After Discontinuing Use of Thiouracil.—The basis of this report by Bartels is experience with 21 patients having primary hyperthyroidism, observed for as long as two and a half years from the standpoint of remission or relapse after withdrawal of thiouracil. Eight patients remained in remission and 13 had a relapse. The duration of thiouracil administration after restoration of the basal metabolic rate to normal was not a factor in the duration of remission, since prolonged remissions occurred after short therapy and prompt relapse was observed after long treatment. Clinical experience indicates that patients with mild primary hyperthyroidism may occasionally have a prolonged remission either spontaneously or following brief iodine therapy. Therefore thiouracil might be classified with iodine in its power to cause a remission in mild hyperthyroidism. If the 8 patients now in remission are observed long enough, all can be expected to have a relapse. Patients having large thyroid glands or large recurrent remnants, in whom the basal metabolic rate is in the higher range, can be expected to have a relapse not later than six months after withdrawal of the thiouracil.

American J. Obstetrics and Gynecology, St. Louis

53:1-180 (Jan.) 1947

Office Study of Infertility. I. M. Procter and K. Dickinson.—p. 65.
Coexisting Cancer of Ovary and Fundus. C. J. Andrews and R. B. Nicholls.—p. 75.
Physiology of Labor. R. Turpin.—p. 78.
Use of Penicillin in Repair of Complete Perineal Lacerations. G. Johnson.—p. 82.
Late Postpartum Hemorrhage. S. A. Wolfe and P. Pedowitz.—p. 84.
Extraperitoneal Cesarean Section; Intraperitoneal Approach: Presentation of the Author's Technic. R. A. Cacciarelli.—p. 100.
*Surgical Treatment of Phlebothrombosis in Obstetric and Gynecologic Patients. F. W. Bancroft.—p. 109.
Advantages of Surgical Treatment in Phlebothrombosis. R. S. Millen.—p. 117.
Psychosomatic Aspect of Dysmenorrhea: Sensory Conditioning Process. W. E. Hunter and B. R. Rolf.—p. 123.
*Positive Diagnosis of Hydatidiform Mole Without Evidence of Mole Cysts. H. Acosta-Sison.—p. 132.
*Carcinoma of Cervix During First Two Decades of Life. R. S. Pollack and H. C. Taylor Jr.—p. 135.
Acute Leukemia and Pregnancy: Report of Fatal Case Treated with Penicillin. R. Harris, I. G. Tchertkoff and L. Greenwald.—p. 142.
Endocrine Influences on Blood Pressure of Normal and Hypertensive Rats. E. W. Page and E. Ogden.—p. 150.

Surgical Treatment of Phlebothrombosis.—Bancroft is impressed with the fact that many of the thrombotic processes originate in the veins of the broad ligament and that to treat a gynecologic or obstetric case successfully a bilateral approach is the best procedure. When the complication occurs as the result of some general surgical process, the treatment of the involved side is probably sufficient. There is a certain risk in the bilateral approach because in sucking out the thrombus from a vein one is likely to suck out more blood than one realizes, and a bilateral approach might tend toward exsanguinating the patient. Where phlebothrombosis is present and there is danger of pulmonary emboli, the operative approach and ligation of the vein is safer than relying on the use of anticoagulants or lumbar sympathetic block. While excellent results have been reported from the use of anticoagulants without operative intervention, convalescence is safer and is shortened by either proximal ligation or thrombectomy. Emboli have occurred shortly after the cessation of heparin therapy.

Diagnosis of Hydatidiform Mole.—The method of diagnosing hydatidiform mole presented by Acosta-Sison is based on the fulness of part or the whole of the lower uterine segment in conjunction with undue uterine enlargement as related to the number of months of amenorrhea, uterine bleeding, absence of a fetus as revealed by palpation auscultation and of fetal movements, and absence of amniotic fluid.

Carcinoma of Cervix During First Two Decades of Life.—In a chronologic table beginning with 1880, Pollack and Taylor list 30 true carcinomas of the cervix in females less than 20 years of age. They themselves observed one in a woman aged 18. The histologic type in 22 patients was adenocarcinoma. In the majority the clinical course was progressively downward. Four patients survived five years. The apparent tendency of cancer to manifest itself to an increasing degree during the earlier decades is a fact calling for more emphasis.

American Journal of Pathology, Ann Arbor, Mich.

23:1-166 (Jan.) 1947

Adnexal Carcinoma of Skin. N. C. Foot.—p. 1.
Mummified Epidermal Cysts: (So-Called "Calcified Epitheliomas"). L. S. King.—p. 29.
Ewing's Sarcoma of Bone. L. Lichtenstein and H. L. Jaffe.—p. 43.
Fatty Infiltration of Liver in Patients with Mongolism and in Children with Hydrocephaly and Microcephaly. E. C. Roosen-Runge.—p. 79.
*Histopathology of Monocytic Leukemia. P. A. Herbut and F. R. Miller. —p. 93.
Drainage of Pulmonary Veins into Ductus Venosus Arantii: Report of Case. W. H. Mehn and F. E. Hirsch.—p. 125.
Gross Cerebral Hemorrhage and Vascular Lesions in Acute Tuberculous Meningitis and Meningoencephalitis. J. W. Goldzieher and J. R. Lisa. —p. 133.
Studies on Periarteritis Nodosa: II. Role of Various Factors in Etiology of Periarteritis Nodosa in Experimental Animals. C. C. Smith and Pearl M. Zeek.—p. 147.
Nonportal Distribution of Trabeculae in Dietary Cirrhosis of Rats and Carbon Tetrachloride Cirrhosis of Rats and Guinea Pigs. L. L. Ashburn, K. M. Endicott, F. S. Daft and R. D. Lillie.—p. 159.

Histopathology of Monocytic Leukemia.—By a detailed study of the histopathologic changes in 8 cases of monocytic leukemia, Herbut and Miller have shown that reticuloendothelial cells are unquestionably the precursors of monocytes. Proliferation and transitions to the freely circulating cell appear to depend on the age of the patient and the degree of stimulation. A fulminating course in a young person will produce extensive reticulum hyperplasia because the maturation of the cells cannot keep pace with proliferation. In an older person a similarly acute course will produce less hyperplasia because the tissues are less adaptable to proliferation. In the latter, as well as in protracted cases, there is a more subtle and complete transformation of the reticuloendothelial cells into monocytes, and the transitions are more difficult to demonstrate. Like all reticuloendothelial cells, the Kupffer cells of the liver were seen to participate in the formation of monocytes in some cases. All transitions from initial swelling to complete extrusion into the sinusoidal lumens were encountered. A heterogeneous accumulation of leukocytic elements, producing a picture resembling Hodgkin's disease, was found in acute cases. The brain was examined in 3 cases. In each of these there were leukemic infiltrates and hemorrhages. The latter were of sufficient degree to be a contributory or immediate cause of death in 2 cases.

Annals of Otol., Rhin. and Laryngology, St. Louis

55:719-990 (Dec.) 1946. **Partial Index**

Chronic Proliferative Osteomyelitis of Skull. J. H. Maxwell.—p. 719.
*Effect of Penicillin Lozenges on Clinical and Bacteriologic Findings of Patients. D. Taylor, Elaine Culver and W. J. Nungester.—p. 743.
Tonsillectomy in Early Convalescence from Acute Tonsillitis, with Prophylactic Use of Sulfonamides. J. E. Bordley and T. McP. Brown.—p. 751.
Maxillary Sinus Drainage. O. E. Van Alyea.—p. 754.
General Factors in Irradiation Therapy. C. F. Burnam.—p. 764.
Irradiation of Nasopharynx. S. J. Crowe.—p. 779.
Chemical Burns of Esophagus. G. I. Uhde.—p. 795.
Aural Rehabilitation Program of U. S. Army for Deaf and Hard of Hearing. L. E. Morrissett.—p. 821.
Evaluation of Allergen Diagnosis. J. C. Healy.—p. 871.
Blood Allergy Method in Otolaryngology. V. J. Kelley.—p. 878.
Subdural Empyema of Frontal Sinus Origin. E. C. Schultz.—p. 882.
*Clinical Observations on Diagnosis and Treatment of Headache with Histamine. O. J. Dixon.—p. 891.

Penicillin Lozenge Therapy.—Observations reported by Taylor and his associates indicate that patients given penicillin lozenges after tonsillectomy appeared to have less membrane formation in the tonsillar fossae. They also complained less of pain than patients not so treated. Similar findings were made in patients following dental extractions. Penicillin lozenge therapy seemed to be of little value in deep-seated tonsillitis or pharyngitis but appeared to have definite value in early cases of pharyngitis. Bacteriologic findings support the clinical observations. The total, and more particularly the Streptococcus viridans, counts of mouth and throat flora were lowered by penicillin lozenge therapy. The persistence of penicillin in mouth washings was of short duration after the disappearance of the lozenges.

Histamine Headache.—Dixon reports observations on a series of patients with various types of headache who were given histamine as a diagnostic or a therapeutic measure. The routine course of treatment usually began with 0.35 cc. of histamine diphosphate, given subcutaneously, with the daily dosage increased by 0.05 cc. until a maximum of 1 cc. was reached. The patient was sometimes aware of a slight headache, temporal throbbing and flushing, which lasted for a few minutes. When relief from the complaint was obtained, it was no effort to have the patient continue on a routine schedule. The injections should continue for about twenty-one days. Complete relief was obtained in 55 per cent of the cases, intermittent relief in 35 per cent, slight relief in 5 per cent and no relief in 5 per cent. Patients with typical histamine headache will continue to be rare, and borderline cases will respond in a highly satisfactory manner. Any diagnosis which can be made and proved only by some form of therapy always involves many errors.

Archives of Internal Medicine, Chicago

79:1-128 (Jan.) 1947

Subacute Bacterial Endocarditis: Experiences During Past Decade. J. H. Seabury.—p. 1.
Edema or Hernations of Fat Lobules as Cause of Lumbar and Gluteal "Fibrositis." W. S. C. Copeman and W. L. Ackerman.—p. 22.
*Schistosomiasis Japonica with Cerebral Manifestations: Report of 7 Cases. A. J. B. Tillman.—p. 36.
Tests of Liver Function in Schistosomiasis Japonica, with Particular Reference to Antimony Treatment and with Report of 2 Autopsies. S. W. Lippincott, F. K. Paddock, M. C. Rhees, W. B. Hesselbrock and L. D. Ellerbrook.—p. 62.
*Immersion Hypothermia. E. Wayburn.—p. 77.
Syphilis: Review of Recent Literature (concluded). F. W. Reynolds and J. E. Moore.—p. 92.
Review of Neuropsychiatry for 1946. S. Cobb.—p. 113.

Cerebral Manifestations in Schistosomiasis Japonica.—Tillman says that among 181 patients admitted to his hospital during the peak of the Philippine campaign 6 were observed with cerebral manifestations. An additional patient observed at another hospital is included in this report. The first patient was a soldier who was admitted with a diagnosis of encephalitis from two to three months after exposure. There were quadriplegia, confusion, disorientation, pupillary changes, paresis of the abducens nerve and incontinence. Recovery was slow and incomplete one and a half months later. Leukocytosis and eosinophilia were evident. Ova of hookworm and Schistosoma japonicum were demonstrated. The effects of fuadin and antimony and potassium tartrate were beneficial. Residua involving the pyramidal and extrapyramidal tract and the cortex were present three months after the onset of disturbances of the central nervous system. Cases identical with those reported may arise in the United States either if a person comes from endemic areas by rapid air transportation or if the disease has been asymptomatic, undiagnosed or not entirely cured by treatment.

Immersion Hypothermia.—Wayburn describes observations on 6 patients who had been immersed in the North Sea on their return from long combat flying missions. Immersion hypothermia is a progressive clinical syndrome. The clinical picture is the resultant of the coldness of the water, the length of the exposure, the emotional factors affecting the patient before and during exposure and the specific response of the person to cold. The chief effects are those on the cardiovascular system. Among the transient conditions observed were auricular fibrillation and flutter, ventricular extrasystoles, slight prolongation of the PR interval and falling arterial blood pressure, with narrowing of the pulse pressure. Involvement of the nervous system was indicated by partial to complete loss of consciousness and irrational behavior. Hemoconcentration and notable hyperglycemia were found in 1 case. Treatment consists in rapid restoration of normal body temperature by

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external heat, minimal activity, administration of warm fluids by mouth and, in severe conditions, use of blood plasma. No drugs were used in this series. Use of epinephrine is contraindicated.

Archives of Pathology, Chicago

43:1-116 (Jan.) 1947

*Effects of Radioactive Phosphorus (P^{32}) on Normal Tissues: Histologic Study of Changes Induced in Organs of Patients with Malignant Lymphomas. W. R. Platt.—p. 1.

Brain Repair: II. Role of Lipids of Brain in Genesis of Gliosis. S. P. Hicks.—p. 15.

Experimental Study of Purpuric Meningococcemia in Relation to the Shwartzman Phenomenon, with Discussion of Meningococcic Purpura, Waterhouse-Friderichsen Syndrome and Bilateral Renal Cortical Necrosis. B. Black-Schaffer, T. G. Hiebert and G. P. Kerby.—p. 28.

Marble Bone Disease: Study of Osteogenesis. Carla Zawisch.—p. 55.

Effects of Estradiol Benzoate and Their Modification by Bleeding: Studies on Skeleton and Blood Calcium of the Cockerel. K. Salomon, Beverly W. Gabrio, E. Reinhard and Ruth Silberberg.—p. 76.

Effects of Radioactive Phosphorus (P^{32}) on Normal Tissues.—Platt reports 43 cases in which tissue changes produced by radiophosphorus were studied microscopically including cases of various forms of leukemia, Hodgkin's disease, multiple myeloma, lymphosarcoma and melanoma. In almost every therapeutic application of radiation, normal tissues are affected as well as the intentionally irradiated focus of disease. The beta emanations of radioactive phosphorus produce characteristic changes in many body tissues, which vary in intensity but are similar to those produced by other types of radiation. Prominent specific features are varying degrees of cellular death, abnormal mitoses producing giant irregular nuclei, fibrosis, hyalinization of collagen and a vascular alteration characterized by thickening and hyalinization of small blood vessels. There is selective localization of larger quantities of radioactive phosphorus and greater injury in the tissues most often involved by the neoplastic cells of malignant lymphomatoses and myelomatoses, i. e. marrow, liver, spleen and lymph nodes. Changes were also demonstrated in the lungs, kidneys, gastrointestinal tract, ovaries and testes. The author thinks that serious consideration must be given to the changes in the testes and the ovaries of patients who are in the reproductive period of life because observation of these organs confirms the possibility that spermatogenesis and oogenesis may decrease or disappear, with development of sterility, in young persons given radiophosphorus.

Archives of Surgery, Chicago

54:1-116 (Jan.) 1947

*Effect of Estrogenic Hormone on Advanced Carcinoma of Female Breast. J. B. Herrmann, F. E. Adair and Helen Q. Woodard.—p. 1.

Patent Omphalomesenteric Duct and Its Relation to Diverticulum of Meckel. C. F. Kittle, H. P. Jenkins and L. R. Dragstedt.—p. 10.

*Granulomas Caused by Surgical Silk and Cotton Sutures. T. G. Orr.—p. 37.

Strangulated Inguinal Hernia: Observations in 50 Cases. M. V. Bhajekar.—p. 41.

Gastric Ulcers Produced Experimentally by Vascular Ligation. B. N. Berg.—p. 58.

Tuberculous Dactylitis in Adult. A. L. Umansky, P. T. Schlesinger and B. B. Greenberg.—p. 67.

Method of Correction of Ectopia Cordis. J. F. Burton.—p. 79.

I. Diseases of Growing and Adult Bone. J. A. Siegling.—p. 85.

II. Congenital Deformities. J. H. Kite.—p. 91.

III. Tumors of Bone and of Synovial Membrane. H. W. Meyerding assisted by F. L. Flashman, F. L. Padilla, A. R. Pils and J. H. Varney.—p. 102.

Estrogenic Substance in Advanced Mammary Carcinoma.—The favorable results obtained by some English investigators with estrogenic substance in women with advanced carcinoma induced Herrmann and his associates to try this procedure in 17 selected patients, who were treated exclusively with a synthetic estrogen (ethinyl estradiol) administered orally. The dose of ethinyl estradiol varied from 0.15 to 0.7 mg. daily. There was a favorable response in 7 of the patients, 5 with superficial lesions of the soft parts and 2 with pulmonary metastases. The authors stress that their experiences with the estrogenic treatment does not differ greatly from that reported by British authors in about 100 cases. An important point of agreement is that the favorable results are obtained predominantly in women above the age of 60. Estrogens seem to have a decidedly deleterious effect on women in the younger age group. This appeared to be most striking in a 40 year old patient who was menstruating regularly. When first seen her general condition was good despite the mass in the right breast and right axilla. Soon after the institution of the estrogenic therapy her condition deteriorated. Within threee months she was bedridden, and she died one month later.

Granulomas Caused by Surgical Sutures.—Orr reports 5 instances of granulomatous lesions which developed after the use of surgical silk and cotton in clean wounds. He stresses that late infection caused by nonabsorbable sutures usually develops slowly. Pain is not severe, and the patient may complain only of discomfort. A firm indurated mass forms beneath the scar of operation, which is usually slightly tender. There may be a slight rise in temperature and leukocyte count. Incision reveals a relatively small abscess surrounded by a firm wall of fibrous tissue 1 cm. or more in thickness. Granulomas caused by surgical silk and cotton must be uncommon, since they occurred but four times in several hundred clean operations in the University of Kansas Hospitals.

Arizona Medicine, Phoenix

4:1-72 (Jan.) 1947

The Acute Abdomen. P. Thorek.—p. 25.

Craniocerebral Trauma. J. Greenwood Jr.—p. 31.

Bilateral Hypoplasia of Kidneys, with Report of Case. J. Kruglick and S. Minnick.—p. 34.

Effect of Altering the Ionic Content of Serums in Vivo on Syphilis Serology. E. L. Breazeale, L. F. Pierce and T. R. Reusser.—p. 36.

"National Enrolment." J. L. Redheffer.—p. 38.

Bull. of the U. S. Army Med. Dept., Washington, D. C.

7:1-158 (Jan.) 1947

*Treatment of Acute Attacks of Vivax and Falciparum Malaria: Comparison of Atabrine and Quinine. F. B. Bang, N. G. Hairston, W. Trager and J. Maier.—p. 75.

*Infectious Hepatitis in Relation to Blood Transfusion. P. E. Sartwell.—p. 90.

Streptomycin Therapy in Typhoid Infections. E. J. Pulaski and W. H. Anspacher.—p. 101.

Arteriovenous Fistulae of Cervical Portion of Vertebral Vessels.—p. 109.

Aid in Training of Neuropsychiatric Ward Officers. H. R. Blank.—p. 116.

Chronic Diarrhea in Military Personnel Returning from Tropics. B. Kenamore.—p. 121.

Neuropsychiatric Appraisal in Induction Station. H. C. Leavitt.—p. 125.

Acute Attacks of Malaria.—Bang and his associates present a comparison between atabrine and quinine in the treatment of acute attacks of malaria in white soldiers infected during the campaigns in Australian New Guinea. Atabrine was superior to quinine in the treatment of acute vivax malaria. No significant differences in response to therapy were noted in 104 cases of falciparum malaria treated with quinine as compared with 99 cases treated with atabrine. Both fever and parasites disappeared rapidly under treatment. Heavy infections responded as rapidly as light infections.

Infectious Hepatitis and Blood Transfusion.—A hepatitis survey was carried out on the first day of June 1945 in all army general hospitals in the United States. Of 1,762 patients with hepatitis under treatment 500 gave a history of receiving transfusions of blood or blood products prior to the onset of hepatitis. There had been 15 deaths from hepatitis in the thirty days immediately preceding the date of survey, including 9 among the transfused patients. In the group who had received transfusions prior to the onset of hepatitis the intervals between wounding (or onset of initial illness) and the development of hepatitis formed a striking pattern. This interval was between eight and sixteen weeks in 63 per cent. The peak interval was from ten to twelve weeks. The pattern in the transfused group did show a close resemblance to the incubation periods of jaundice resulting from vaccination with icterogenic lots of yellow fever vaccine in 1942. Sartwell concludes that a large proportion of the cases of hepatitis in transfused individuals probably resulted from transmission of an icterogenic agent in the transfused blood or plasma.

Canadian Medical Association Journal, Montreal

56:129-248 (Feb.) 1947

Application of Biochemistry to Medicine. D. L. Thomson.—p. 129.
Some Physiologic Principles in Surgery of Stomach. L. R. Dragstedt. p. 133.
*Effect of Quinine and Atabrine on Gastric Secretion: Preliminary Communication. B. P. Babkin and Dorothy Karp.—p. 137.
Geographic Study of Hay Fever Plants in Manitoba. C. H. A. Walton and Margaret G. Dudley.—p. 142.
Diagnosis and Treatment of Paraesophageal Hiatus Hernia. K. R. Trueman.—p. 149.
Psychiatric Objectives of Our Time. R. R. Grinker.—p. 153.
Antihistamine Drugs. C. H. A. Walton and J. A. Kristjansson-MacDonell.—p. 162.
Cesarean Section. A. W. Andison.—p. 170.
Sarcoidosis. A. Anglin.—p. 177.
Evaluation of X-Ray Evidences of Sinus Disease. A. W. Proetz. —p. 183.
Importance of Correct Diagnosis in Superficial Radiation Therapy of Benign Skin Disease. J. Sommers.—p. 185.
Nutrition Survey Among School Children in British Columbia and Saskatchewan. L. B. Pett and F. W. Hanley.—p. 187.
Treatment of Urethritis. C. M. Spooner.—p. 193.
Recent Advances in Pentothal Anesthesia. G. A. F. Wainwright. —p. 198.

Effect of Quinine and Atabrine on Gastric Secretion.—Babkin and Karp studied the effect of quinine and atabrine (quinacrine) on gastric secretion in dogs evoked by faradization of the vagus nerves or by subcutaneous administration of histamine dihydrochloride. Intravenous administration or moderate doses of quinine bisulfate or atabrine diminished the gastric secretion produced by rhythmic vagal stimulation. Small or moderate doses of quinine or atabrine did not affect gastric secretion evoked by the subcutaneous administration of histamine. The amount of pepsin discharged from the peptic cells (pepsin output) under the influence of vagal stimulation was diminished after intravenous administration of quinine or atabrine. The effect of quinine on gastric secretion during oral therapy in a normal dog with an esophagotomy and a gastric fistula was rather weak. Atabrine will act on gastric secretion mildly and will diminish to a certain extent the nervous or cephalic phase of secretion, which is so much exaggerated in ulcer patients. The doses of atabrine which can be used in ulcer patients will have to be determined. Special cases of peptic ulcer will have to be selected in which a moderate inhibition of vagal gastric secretion would be beneficial. Harm may be done by employing atabrine in cases with a tendency to hemorrhage, owing to the vasodilatory action of this drug.

Cancer Research, Baltimore

7:65-128 (Feb.) 1947. Partial Index

Sex Hormone Effects on Chromosome Size in Leukemic and Normal Lymphocytes of C58 Mice. J. J. Biesele and G. Gasic.—p. 65.
Stromal Malignancy in Mouse-Grown Transplants of Egg-Cultivated Mouse Mammary Carcinoma. A. Taylor and Nell Carmichael.—p. 78.
Production of Tumors in Rats by 2-Aminofluorene and 2-Acetylaminofluorene: Failure of Liver Extract and of Dietary Protein Level to Influence Liver Tumor Production. P. N. Harris.—p. 88.
Metabolism of N,N-Dimethyl-p-Aminoazobenzene and Related Compounds. C. J. Kensler, J. W. Magill and K. Sugiura.—p. 95.
Study of Three New Duck Variants of Rous Chicken Sarcoma. F. Duran-Reynals.—p. 99.
Carcinogenic Action of Ethyl Urethane on Rats. W. G. Jaffé and R. Jaffé.—p. 107.

Connecticut State Medical Journal, Hartford

11:1-84 (Jan.) 1947

Early Experiences with Penicillin Therapy. H. Florey.—p. 5.
Some Problems of Protein Deficiency. I. S. Ravdin.—p. 7.
Anomalies of Urogenital Tract in Soldiers. H. R. Newman.—p. 16.
Adequate Care of Chronically Ill. F. Goldmann.—p. 22.
Commentator's View of Medical Dilemma. U. Close.—p. 28.

11:85-160 (Feb.) 1947

Recent Advances in Medical and Surgical Management of Hypertension. W. Goldring.—p. 87.
Rheumatic Heart Disease. E. B. Prout.—p. 98.
Thyroid Lumps. O. Cope.—p. 100.
Use of Thiourea in Control of Hyperthyroidism. T. S. Danowski, Evelyn B. Man and A. W. Winkler.—p. 105.
Health—First Objective of Education. F. S. Stafford.—p. 108.
Penicillin in Treatment of Tetanus: Case Report. L. A. Chotkowski. —p. 111.
Address by the President. C. B. Gibson.—p. 112.

Diseases of Chest, Chicago

13:1-90 (Jan.-Feb.) 1947

Fifteen Years' Experience with Carbon Dioxide in the Management of Cough. A. L. Banyai.—p. 1.
Surveys, BCG, Social Insurance and Health Card as Part of Tuberculosis Control in Asuncion, Paraguay. A. R. Gines.—p. 20.
*Diasone Therapy in Pulmonary Tuberculosis. G. D. Kettelkamp and B. Friedman.—p. 23.
Bronchiectasis: Neglected Disease. W. M. Kinney.—p. 33.
Proposed State Tuberculosis Control Program. H. Mark.—p. 48.
Medical Management of Bronchiectatic Patient. E. Mendenhall.—p. 59.
Subdiaphragmatic Aberrant Pulmonary Tissue (Case Report). A. R. Valle and M. L. White Jr.—p. 63.

Diasone Therapy in Pulmonary Tuberculosis.—Kettelkamp and Friedman point out that the sulfonamides have been disappointing in the chemotherapy of tuberculosis but that related compounds, called sulfones, have been found more effective. One of these is diasone. Seventeen patients were selected for diasone therapy. They were mainly those in which ordinary therapy had failed. Five of the 17 cases showed some improvement. None of these changes were remarkable or spectacular. In 3 of the cases other procedures may have played a part. In 1 case, although improvement has occurred in one area, in another area a cavity has increased in size. In the last case, after initial improvement the clinical course has remained stationary.

Endocrinology, Springfield, Ill.

40:1-64 (Jan.) 1947

Induction of Ovulation in Diestrous Mouse by Gonadotropins. F. J. Saunders.—p. 1.
Action of Human Prostate Slices on Alpha-Estradiol and Estrone. A. L. Lehninger and W. W. Scott.—p. 9.
Mechanism of Diestrum During Lactation in Albino Rat. L. Desclin. —p. 14.
Mobilization of Alkaline Phosphatase in Uterus of Mouse by Estrogen. W. R. Atkinson and H. Elftman.—p. 30.
Early Mating and Pregnancy in Monkey. G. Van Wagenen.—p. 37.
"Sparing" Effect of Progesterone on Hepatic Inactivation of Alpha-Estradiol. A. Segaloff.—p. 44.
Metabolic Significance of Protein Bound Iodine of Plasma: Study of Its Concentration Under Various Conditions and of Its Rate of Formation as Measured with Radioactive Iodine. I. L. Chaikoff, A. Taurog and W. O. Reinhardt.—p. 47.
Incidence of Delayed Ovulations Following Abdominal Operations in Domestic Hen. I. Rothchild and R. M. Fraps.—p. 55.

Florida Medical Association Journal, Jacksonville

33:347-408 (Jan.) 1947

Dislocated Intervertebral Disk of Lumbar Region. J. G. Lyerly.—p. 377.
History of Civilian Medical Care in Key West up to 1945. A. W. Diddle.—p. 383.

33:409-460 (Feb.) 1947

Role of Rh Factors in Clinical Medicine. J. N. Patterson.—p. 439.
Ligation of Inferior Vena Cava for Prevention of Pulmonary Embolism: Report of Case. F. H. Bowen, H. M. Anderson and R. W. Starbuck. —p. 443.
Combined Pregnancy: Report of Case. M. A. Collier.—p. 446.

Gastroenterology, Baltimore

8:1-122 (Jan.) 1947

Postbulbar Duodenal Ulcers. L. Falla Alvarez and P. L. Fariñas. —p. 1.
Observations on Occurrence of Nausea Among Combat Soldiers. S. Wolf. —p. 15.
Pathogenesis of Cytosiderosis (Hemochromatosis) as Evidenced in Malnourished Africans. J. Gillman and T. Gillman.—p. 19.
Pancreas: Contributions of Clinical Interest Made in 1945. R. Elman and H. Schwarz.—p. 24.
*Restoration of Gastric Motility by Urethane of B-Methyl Choline After Section of Vagus Nerves for Peptic Ulcer. T. E. Machella, H. H. Hodges and S. H. Lerner.—p. 36.
Further Advances in Liver Function Tests and Value of Therapeutic Test in Facilitating Earlier Diagnosis and Treatment of Liver Impairment. J. G. Mateer, J. I. Baltz, P. D. Comanduras, H. H. Steele and S. W. Brouwer.—p. 52.
*Gastroileostomy, Rare Surgical Error: Symptoms and X-Ray Findings. C. H. Brown, J. R. Colvert and B. E. Brush.—p. 71.
Comparative Study of Anesthetic Agents on Propulsive Motility of Small Intestine. E. J. Van Liere, J. C. Stickney and D. W. Northup. —p. 82.

Urethane of B-Methyl Choline and Gastric Motility.—According to Machella and his associates great changes occur in the secretory and motor functions of the stomach following section of the vagus nerve. The retention may lead to gastric distress, anorexia, nausea, vomiting and malnutrition.

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The authors show that motility may be restored by the administration of a parasympathicomimetic drug. The subcutaneous administration of urethane or B-methyl choline to a post-vagotomy patient who had gastric retention led to restoration of gastric peristalsis and motility and relieved him of his epigastric distress, anorexia and nausea. Subsequently its oral and sublingual administration had a similar effect. A placebo was not equally effective. In another vagotomized patient the parenteral administration of the drug induced sufficient tonus and peristalsis, as well as pyloric relaxation, to permit duodenal intubation, a procedure which was accomplished prior to vagotomy but had been impossible during the postvagotomy period.

Gastroileostomy, a Rare Surgical Error.—Brown and his co-workers point out that a rather typical syndrome develops following supposed gastrojejunostomy in patients in whom a gastroileostomy has been done by mistake. The authors review the previous literature of 22 cases and present 3 new cases. The predominant symptoms are loss of weight, pain, vomiting, which may be fecal in type, and diarrhea. The stools may contain undigested food material. There may be great loss of weight due to poor assimilation. Pain may shift to the periumbilical and even to the lower abdominal area and may be quite severe. Hemorrhage occurred in 3 and ileac ulcer was present in 6 of the 22 cases previously reported. Serial barium meal films are most helpful in the diagnosis. In 2 of the cases reported a patent pylorus responded promptly and extremely well to simple disconnecting of the "gastro-enterostomy."

Geriatrics, Minneapolis

2:1-68 (Jan.-Feb.) 1947

Many Factors May Influence Senescence. N. S. Davis.—p. 5.
Clinical Aspects of Intraoral Age Changes. H. B. G. Robinson.—p. 9.
Surgery of Prostate Gland. O. S. Lowsley and A. Gentile.—p. 13.
Uterine Bleeding: Menopausal and Postmenopausal. B. L. Cinberg. —p. 17.
*Vitamin D Therapy in Treatment of Scleroderma and Allied Conditions: Three Cases. C. F. Norman.—p. 24.
Wechsler-Bellevue Scale in Individuals Past Sixty. M. J. Madonick and Marian Solomon.—p. 34.
Basic Factors of Nutrition in Old Age. J. T. Freeman.—p. 41.

Vitamin D in Scleroderma.—Norman believes that vitamin D therapy, rather than parathyroidectomy, is the treatment of preference in scleroderma and the related disorders that are accompanied by hyperfunction of the parathyroid glands. He suggests that chronic overfunction of the parathyroids constitutes a common denominator in scleroderma, dermatomyositis, chronic arthritis, Raynaud's disease and arteriosclerosis. Such hyperfunction is presumably induced to maintain physiologic plasma, calcium and phosphorus levels, which in these conditions are defective owing to inadequate intake of vitamin D and calcium or to the chronic lack of irradiation of the skin, the organ for the elaboration of the vitamin. He reports 3 cases of sclerosis all with skin manifestations and apparently some muscle and tendon involvement. There was sclerosis of the arterioles and edema of the collagen fibers in the first 2 cases. In the third case there was atrophic arthritis in addition to cutaneous and subcutaneous manifestations. In all 3 the condition of the hands and feet resembled that in Raynaud's disease. In all 3 improvement to the point of complete rehabilitation occurred, with restoration of normal skin and presumably normal condition of the arterioles. Where complete ankylosis had not ensued, joint involvement was reduced; active and passive movements increased and pain subsided.

Indiana State Medical Assn. Journal, Indianapolis

40:1-94 (Jan.) 1947

Family Physician in Relation to Vocational Rehabilitation. F. M. Hall. —p. 7.
Federal Income Tax and Medical Profession. F. Shirley Wilcox.—p. 19.
State Inheritance Tax. G. F. Dickman.—p. 21.
National Foundation for Infantile Paralysis. Betty Malinka.—p. 22.
A. M. A. House of Delegates Establishes Public Relations Department. F. S. Crockett.—p. 62.

40:95-186 (Feb.) 1947

Curare in Anesthesia. R. T. Knight.—p. 125.
Office Management of Diabetes. R. E. Mitchell.—p. 128.
Management of Epileptic Patient. H. D. Fabing.—p. 132.

Journal of Allergy, St. Louis

18:1-80 (Jan.) 1947

Histamine Azoprotein: Clinical Evaluation. H. D. Dundy, B. Zohn and R. Chobot.—p. 1.
Histamine Azoprotein in Treatment of Allergy. M. B. Cohen and H. J. Friedman.—p. 7.
Clinical and Serologic Study of Ragweed Hay Fever Patients Treated with Histamine Azoprotein (Hepamine): Abbreviated Report. S. Hebald, R. A. Cooke and Lillian M. Downing.—p. 13.
*Treatment of Asthma by Inhalation of Aerosol of Aminophylline. S. J. Prigal, A. M. Brooks and R. Harris.—p. 16.
Influence of Soybean Products on Iodine Number of Plasma Lipids and Course of Eczema. A. V. Stoesser.—p. 29.
Effect of Beta-Dimethylaminoethyl-Benzhydryl-Ether-Hydrochloride on Histamine Threshold of Human Skin. M. B. Cohen, H. J. Friedman, J. Zonis, M. Burke and L. W. Abram.—p. 32.
Prediction of Constitutional Reactions by Testing Ragweed Pollen Fractions. J. Zonis and N. Rubin.—p. 36.
Loeffler's Syndrome: Report of Two Cases, One with Recurrent Features, and One Associated with Hay Fever. I. M. Alpher.—p. 39.
Case of Contact Dermatitis of Eczematous Type Resulting from Sensitization to Natural Animal Hair. A. Rostenberg Jr.—p. 47.
*Allergic Parotitis. G. L. Waldbott and J. J. Shea.—p. 51.
Concerning Reliability and Unreliability of Dried Pollen from Commercial Sources. R. V. Ellis and A. O. Dahl.—p. 55.

Aerosol of Aminophylline in Asthma.—Prigal and his associates treated 40 adults who had bronchial asthma with an aerosol of aminophylline produced by a combined steam generator and aerosolizer. Thirty-two of the patients experienced various degrees of relief, ranging from slight temporary to great and prolonged. Five patients with severe asthma responded to aminophylline by inhalation after failing to respond to aminophylline intravenously. Some cases unresponsive to the aerosol did respond to the intravenous injection. Some cases responded to neither method. Vital capacity studies of 9 asthmatic patients, before and after the administration of aminophylline aerosol, showed an average increase of 20.6 per cent. The steam generated by the aerosolizer may in some instances afford some relief (5 of 9 patients responded favorably), but this is slight when compared with the relief obtained with aminophylline.

Allergic Parotitis.—Waldbott and Shea point out that cases of recurrent swelling of the parotid gland have been reported which indicate that it may occur on an allergic basis. In 3 patients with asthma parotid swellings occurred shortly before the onset of asthmatic seizures. In 1 of these patients the swellings had been present for many years before the development of asthma. Foods were identified with the production of these attacks, and their elimination produced relief. Allergy should be considered as a factor in the production of certain cases of recurrent parotitis.

J. Neuropathology & Exper. Neurology, Baltimore

5:271-384 (Oct.) 1946

Distribution of Pathologic Lesions of Central Nervous System in Scrub Typhus: (Tsutsugamushi Disease). A. Weil and W. Haymaker. —p. 271.
*Morphologic Changes in Brain of Monkeys Following Convulsions Electrically Induced. A. Ferraro, L. Roizin and M. Helfand.—p. 285.
*Spina Bifida and Cerebrospinal Fluid. G. B. Hassin and T. Harris. —p. 309.
Syphilitic Amyotrophy: Clinical Pathologic Report of Case Complicating Tabes Dorsalis. B. W. Lichtenstein and J. A. Luhan.—p. 321.
Experimental Arteriosclerosis in Nervous System. R. Altschul.—p. 333.
Atresia and Stenosis of Aqueduct of Sylvius. J. H. Globus and P. Bergman.—p. 342.
Acetylcholine Induced Depression of Cerebral Cortical Activity. F. M. Forster, W. J. Borkowski and R. H. McCarter.—p. 364.
Pyramidal Tract: Relation of Axonal Diameters to Rate of Degeneration as Revealed by Acid Phosphatase Method in Monkey. A. M. Lassek and W. L. Hard.—p. 374.

Changes in Brain of Monkeys Following Electric Shock.—Ferraro and his co-workers demonstrate that electric currents similar in type, intensity, duration of current flow and frequency with that used in human electric shock therapy may cause morphologic changes in the central nervous system of monkeys. The nerve cell alterations are mostly related to circulatory disturbances and increased permeability of the blood vessel walls. When a current of greater intensity and of longer duration is applied, occasional minute petechial hemorrhages result. This seems to support the contention that the severity of the lesions is proportional to the intensity of the electric current, the duration of the current flow and, to a lesser extent, to the number of electric shocks. The histopathologic changes are more pronounced in the areas of tissue traversed by the main

path of the current. Reversible chemical or structural changes and possibly some permanent slight structural damage may be at the base of the temporary alterations in the mental processes occurring in patients in the course of electric shock therapy.

Spina Bifida and Cerebrospinal Fluid.—According to Hassin and Harris the cystic tumor-like protrusion in spina bifida is a distended subarachnoid space caused by excessive accumulation of spinal fluid. The excess is due to defective absorption, the avenues of its escape along the perineurial spaces of the roots, spinal ganglions and the postganglionic peripheral nerves being destroyed. Deprived at the affected levels of the cord of the skeletal and dural support, the constantly accumulating fluid leads to the expansion and consequent protrusion of the subarachnoid membrane and the formation of a sac. Excessive accumulation of spinal fluid in the subarachnoid space may ultimately reflect on the spinal cord where its tissue fluids become stagnant, forming cavities, cysts or so-called meningomyelocystocele. This condition is not a specific type of spina bifida but a complicated meningomyelocele. Hydrocephalus is not an integral part of spina bifida but a distant complication, mostly by so-called Arnold-Chiara malformation, itself probably secondary to traction on the medulla oblongata or cerebellum or both.

Journal of Neurosurgery, Springfield, Ill.

3:461-564 (Nov.) 1946

Cystic Cerebellar Arachnoiditis. R. K. Thompson.—p. 461.
Pain on Stimulating Distal Segment of Divided Peripheral Nerves. J. L. Pool and J. A. Brabson.—p. 468.
Spinal Extradural Cysts, Congenital and Acquired. O. R. Hyndman and W. F. Gerber.—p. 474.
Lucite Calvarium—Method for Direct Observation of Brain: II. Cranial Trauma and Brain Movement. R. H. Pudenz and C. H. Shelden. p. 487.
Surgical Treatment of Hemifacial Spasm. J. Greenwood Jr.—p. 506.
*Cystic Teratomas and Teratoid Tumors of Central Nervous System in Infancy and Childhood. F. D. Ingraham and O. T. Bailey.—p. 511.
Effects of Subarachnoid Instillations of Therapeutic Concentrations of Penicillin Solution on Central Nervous System. A. Gerber, E. Beldrey, H. J. McCorkle and Helen Warmer.—p. 533.

Teratoid Tumors of Nervous System in Childhood.—The 15 teratomas and teratoid tumors reviewed by Ingraham and Bailey were found among 231 neoplasms of the central nervous system operated on at the Children's Hospital in Boston. Eight of the tumors were intracranial and 7 were intraspinal. All contained one or more cysts. The tumors contained tissue elements in their solid portions varying from only keratinizing epithelium to mixtures derived from all germ layers. One tumor, made up of undifferentiated nerve and striated muscle cells, was highly malignant, freely invading the cerebellum and seeding the meninges. There was nothing to suggest the diagnosis preoperatively, but it could be established at operation by demonstration of hair, by finding keratinized or ciliated cells in the cyst fluids or by frozen section. The use of adrenal cortex extract proved to be a valuable adjunct in an operation at which a teratoma of the third ventricle was removed. Two of the patients are living five years or more after operation without evidence of recurrence, 5 for less than five years without evidence of recurrence, 2 have evidence of recurrence and 6 are dead. In 2 patients partial removal of intraspinal teratomas was followed by excellent return of function without recurrence of symptoms over a long period of years.

Maine Medical Association Journal, Portland

38:1-22 (Jan.) 1947

Blood Transfusion and Transfusion Reactions. W. Dameshek.—p. 1.
*Pica: Its Relationship to Lead Poisoning in Children. C. A. Stetson Jr.—p. 10.
What Is the Association of American Physicians and Surgeons (A. A. P. S.)? L. H. Berrie.—p. 13.

38:23-48 (Feb.) 1947

Abortifacient Action of Penicillin in Pregnancy. R. C. Rubnic and M. A. Chapin.—p. 23.
Abdominal-Perineal Wounds. M. T. Shelton.—p. 25.
Treatment of Thermal Burns. E. P. McManamy.—p. 29.
Partial Intestinal Obstruction Due to Persistent Omphalomesenteric Duct. R. T. Mance.—p. 33.

Pica: Its Relationship to Lead Poisoning.—Stetson points out that pediatricians encounter children who eat a variety of bizarre substances, such as hair, dirt, plaster, ashes and animal excrement. The term "pica" has been used to denote this phenomenon. Evidence has been presented that a dietary deficiency of iron, resulting in a microcytic hypochromic anemia, may cause gastric anacidity in children, and that an appreciable number of these children will develop pica. Stetson reports 2 cases. Serious and even fatal lead poisoning may occur in these children following the ingestion of lead-containing paint from furniture and woodwork. He suggests that early and adequate treatment of such anemia may, by eliminating pica, result in the prevention of similar cases.

Michigan State Medical Society Journal, Lansing

46:1-144 (Jan.) 1947

Biliary Tract Surgery: Statistical Study Based on 1,070 Consecutive Cases. W. W. Babcock.—p. 65.
Clinical Study of 180 Cases of Arthritis: Use of Steroid Complex (Whittier), Orthopedic and Other Supportive Measures in Chronic Arthritis. P. B. Magnuson, R. T. McElvenny and Catherine E. Logan.—p. 71.
Neurogenic and Psychogenic Factors in Digestive Tract Disorders. B. C. Lockwood.—p. 77.
Clinical Results with Pyribenzamine, New Histamine Antagonist, in Comparison with Benadryl. S. J. Levin.—p. 85.
Clinical Significance of Hoarseness and Wheezing Respiration. L. H. Clerf.—p. 87.
Present Developments in Combined Anesthesia. R. T. Knight.—p. 90.

Missouri State Medical Assn. Journal, St. Louis

44:1-72 (Jan.) 1947

Heart Disease in Pregnancy. B. E. Hamilton.—p. 17.
Tuberculosis Case Finding Studies in St. Louis County. H. I. Spector, E. G. McGavran, Ruth I. Allen and Dorothy W. Burke.—p. 21.
*Compensation in One Trauma Cancer. M. G. Seelig.—p. 27.

44:73-160 (Feb.) 1947

Treatment of Malaria. G. M. Saunders.—p. 89.
Endocrine Problems from Pediatrician's Viewpoint. A. E. Hansen. —p. 94.
Place and Function of Tuberculosis Sanatorium in Missouri. C. A. Brasher.—p. 102.

Compensation in One Trauma Cancer.—In reported opinions of appellate courts it has been ruled that medical opinion favoring the relationship between trauma and cancer may be supported by one or more facts which, taken together with the expert's testimony that a causal relationship is possible, constitute substantial evidence of that relationship. Such facts are that: 1. The external tissues were apparently "normal" and "healthy" before the trauma. 2. The trauma occurred at the site of the subsequently discovered cancer and was immediately attended with evidence of injury. 3. Such symptoms continued until a cancer was discovered. 4. The cancer appeared within a time after the injury consistent with the known life history of such a cancer. 5. The cancer was of a type that might result from such an injury. 6. There was no other cause for the development of the cancer at that particular place. The courts have not held that it is necessary to prove all these facts. Seelig rests his conviction on personal clinical experiences, of which he cites several. The literature contains a sufficient number of contradictory statements to prompt one to doubt the dictum that no relationship exists between the infliction of a single trauma and the subsequent development of cancer at the site of injury.

New England Journal of Medicine, Boston

236:121-156 (Jan. 23) 1947

Care of Patient Before and After Operation, with Special Reference to Fluid Requirements and Importance of Weighing Scale in Evaluating Status of Hydration. O. H. Wangensteen.—p. 121.
Autopsy Service at the Mary Hitchcock Memorial Hospital. R. E. Miller.—p. 130.
*Penicillin Inhalation Therapy. M. S. Segal and Claire M. Ryder. —p. 132.
Abdominal Surgery. A. W. Allen.—p. 139.
Chondroma of Right Knee.—p. 145.
Defect of Common Bile Duct, Postoperative; Cholangitis.—p. 148.

Penicillin Inhalation Therapy.—Segal and Ryder report results obtained with penicillin aerosol in the treatment of 85 patients with bacterial pneumonia, suppurative bronchitis, bronchiectasis, lung abscess, infective bronchial asthma, infective laryngotracheobronchial edema, chronic pulmonary emphysema and emphysematous blebs. Generally 25,000 units of penicillin was dissolved in isotonic solution of sodium chloride and given

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at three hour intervals for six to eight doses daily. A nebulizer was used which produced a fine mist. Many of the patients were helped considerably and some dramatically. Determinations of the penicillin content of the blood revealed peak levels at the end of thirty minutes which in some cases persisted for as long as two hours. Streptomycin aerosol was also employed in 2 cases of bronchiectasis due to Friedländer organisms, but streptomycin resistive strains appeared rapidly and could not be eradicated despite tremendous doses. This phenomenon was not observed in the penicillin aerosol treated cases. Penicillin may be safely combined with streptomycin aerosol. It is possible that streptomycin aerosol, perhaps combined with intramuscular therapy, may prove of value in selected cases.

236:157-190 (Jan. 30) 1947

*Role of Lancefield Groups of Beta Hemolytic Streptococci in Respiratory Infections. J. H. Dingle and others.—p. 157.
Triple Hemisection: Simplified Procedure for Lengthening Achilles Tendon. R. N. Hatt and T. A. Lamphier.—p. 166.
Pruritus Ani. N. W. Swinton.—p. 169.
Abdominal Surgery (concluded). A. W. Allen.—p. 173.
Chronic Pulmonary Tuberculosis.—p. 179.
Actinomycosis of Lung.—p. 181.

236:191-222 (Feb. 6) 1947

Role of Surgeon in Management of Peptic Ulcer. O. H. Wangensteen.—p. 191.
Venous Thrombosis and Pulmonary Embolism. J. Homans.—p. 196.
Significance of Eosinophilia in Abdominal Complaints of American Soldiers. E. Denhoff.—p. 201.
Cancer. G. W. Taylor.—p. 207.
Myocardial Infarcts, Anterior, Old, and Posterior, Recent.—p. 211.
Diverticulitis, Acute and Chronic.—p. 214.

Role of Lancefield Groups of Streptococci in Respiratory Infections.—Dingle and his co-workers of the Commission on Acute Respiratory Diseases undertook to determine the role of various groups of streptococci in ordinary respiratory infections. A total of 3,026 patients with respiratory infections were studied. In a large army camp only 6 per cent of patients admitted to the hospital from an organization of new recruits had respiratory infections due to streptococci. Bacteriologic and immunologic studies demonstrated that 90 per cent of the infections were due to group A, 4 per cent to group C and 3 per cent to group G. Clinical and epidemiologic evidence suggested that a few patients had infections due to groups B and F. The illnesses produced by the various groups of beta hemolytic streptococci were similar. Streptolysin O antibodies were demonstrated in serum specimens obtained from patients harboring organisms of groups A, C and G. Antifibrinolysin developed in patients with infections due to group A and group C streptococci. The titer of antifibrinolysin in the serum specimens taken during the acute and convalescent phases from patients with infections due to groups C and G was identical when measured with fibrinolysin prepared from organisms of groups A, C and G.

New Orleans Medical and Surgical Journal

99:313-372 (Jan.) 1947

Modern Surgical Procedures for Lesions of Colon and Rectum. H. Mahorner and J. Sabatier.—p. 313.
*Treatment of Choledocholithiasis with Intraductal Injections of Ether: Case Reports. M. L. Michel.—p. 317.
Essential Factors in Preoperative, Operative and Postoperative Care of Gynecologic Patients. C. M. Johnson.—p. 320.
Experience with Sodium Pentothal at Hotel Dieu. E. Souchon.—p. 327.
Intravenous Pyelography as Aid in Diagnosis. L. A. Fortier, T. T. Gately and P. A. Kibbe.—p. 334.
Biologically False Positive Wassermann Tests in Nonsyphilitic Patients. A. L. Miller Jr.—p. 335.
Bed Rest in Heart Disease. J. R. Black.—p. 346.

Intraductal Injections of Ether in Choledocholithiasis.—Michel reports the histories of 2 women with multiple calculi in the common duct. In each case it was believed that adequate choledochotomy had been performed, but subsequent cholangiography revealed a stone lodged at the ampulla which had been missed at operation. In both instances the stones were causing only incomplete obstruction of the duct and might have been overlooked if cholangiography had not been performed. Ether irrigations were successful in dislodging the calculi. Calculi causing incomplete obstruction may be entirely asymptomatic and the stools may be normal in color. However, recurrent complete obstruction of the choledochus is inevitable in such cases. Therefore cholangiography should always be performed after choledochotomy, regardless of the normal appearance of the stool, the absence of symptoms and the diminution of the degree of jaundice.

New York State Journal of Medicine, New York

47:1-96 (Jan. 1) 1947

Local Anesthesia for Cesarean Section. F. P. Light.—p. 48.
Laryngectomy and Its Psychologic Implications. J. S. Greene.—p. 53.
Perennial Vasomotor Rhinitis: Modern Approach to Diagnosis and Treatment. F. H. Westcott.—p. 57.
Treatment of Battle Fractures of Shaft of Femur. J. D. Godfrey.—p. 60.
Divergence Insufficiency and Paralysis. J. W. White.—p. 63.

47:97-208 (Jan. 15) 1947

Emergency Ophthalmic Surgery. D. B. Kirby.—p. 143.
Intocostrin in Treatment of Acute Anterior Poliomyelitis. N. S. Ransohoff.—p. 151.
Osteochondritis of Cervical Spine and Paralysis of All Four Extremities. S. W. Boorstein.—p. 154.
Case of Gargoylism. Lotte Strauss.—p. 157.
Results of Treatment of Lymphosarcoma. A. P. Stout.—p. 158.

Oklahoma State Medical Assn. Jour., Oklahoma City

40:1-38 (Jan.) 1947

Electroencephalograph as Aid in Neuropsychiatric Diagnosis. C. Leonard.—p. 3.
Sympathetic Ophthalmitis. J. R. Reed.—p. 6.
Amputation of Lower Extremities in Peripheral Vascular Disease. W. P. Fite and C. K. Mengel.—p. 10.
Electroencephalography in Diagnosis of Epilepsy. C. T. Steen.—p. 12.

40:39-72 (Feb.) 1947

Surgery of Deafness Due to Otosclerosis. W. L. Bonham.—p. 41.
Institutional Treatment of Syphilis. A. B. Colyar.—p. 44.
Myopia. C. A. Royer.—p. 46.
Epidemiologic Study of Pinworms in Patients at Oklahoma Hospital for Crippled Children. Gladys C. Smith and D. L. Richardson.—p. 49.

Psychosomatic Medicine, Baltimore

9:1-60 (Jan.-Feb.) 1947

Spontaneous Neurosis in Chimpanzees: Theoretical Relations with Clinical and Experimental Phenomena. D. O. Hebb.—p. 3.
Rorschach Exploration of Consecutive Hypnotic Chronologic Age Level Regressions. M. S. Bergmann, H. Graham and H. C. Leavitt.—p. 20.
Autonomic Interrelations with Somatic Nervous System. Margaret A. Kennard.—p. 29.
Relation of Personality Disturbances to Duration of Convalescence from Acute Respiratory Infections. K. Brodman, B. Mittelmann, D. Wechsler, A. Weider and H. G. Wolff, with technical assistance of Margaret D. Meixner.—p. 37.
Incidence of Personality Disturbances and Their Relation to Age, Rank and Duration of Hospitalization in Patients with Medical and Surgical Disorders in Military Hospital. K. Brodman, B. Mittelmann, D. Wechsler, A. Weider and H. G. Wolff, with technical assistance of Margaret D. Meixner.—p. 45.

Public Health Reports, Washington, D. C.

62:77-112 (Jan. 17) 1947

Control of Rat Ectoparasites with DDT. R. G. Ludwig and H. P. Nicholson.—p. 77.
Observations on Nighttime Resting and Biting Habits of Anopheline Mosquitoes in DDT Treated and Untreated Building. C. M. Tarzwell and F. W. Fisk.—p. 84.
Comparative Studies of DDT Dusts, DDT-Oil Sprays and Paris Green Dusts Used Routinely in Anopheline Larvae Control. W. V. Mathis, F. F. Ferguson and S. W. Simmons.—p. 95.

62:113-148 (Jan. 24) 1947

Services and Visits in a Children's Dental Clinic. I. Altman.—p. 113.

62:149-184 (Jan. 31) 1947

Extended Laboratory Investigations on Toxicity of DDT Residues to Adults of Anopheles Quadrimaculatus. R. W. Fay and J. M. Clapp.—p. 149.
Comparative Residual Toxicity of DDT to Anopheles Quadrimaculatus When Applied on Different Surfaces. J. M. Clapp and S. W. Simmons.—p. 158.

South Carolina Medical Assn. Journal, Florence

43:1-28 (Jan.) 1947

Greenville County's Men of Medicine and World War 2. J. McLeod.—p. 1.
Meningococcemia. J. F. Rainey.—p. 5.
Management of Urticaria. W. H. Kelley.—p. 8.

FOREIGN

An asterisk (*) before a title indicates that the article is abstracted below. Single case reports and trials of new drugs are usually omitted.

British Journal of Radiology, London

20:45-84 (Feb.) 1947

Standardized Radiologic Pelvimetry: I. Quantitative Aspects. E. P. Allen.—p. 45.
Radiologic Diagnosis of Lipomata. E. Samuel.—p. 55.
Thickness Technic in Radiographic Examinations of Abdomen and Pelvis. G. D. Steven.—p. 58.
Tuberculous Cystitis: Notes on 3 Cases. A. S. Johnstone.—p. 61.
Effect of Gamma Radiation on Mitosis in Vitro. I. Simon-Reuss and F. G. Spear.—p. 63.
Determination of X-Ray Energy Distributions by Absorption Method. J. R. Greening.—p. 71.
Provisional Calculation of Tolerance Flux of Thermal Neutrons. J. S. Mitchell.—p. 79.

British Medical Journal, London

1:125-168 (Jan. 25) 1947

Care of Children in Hospital. J. C. Spence.—p. 125.
Changes in Hemoglobin Concentration in Acute Stage of Lobar Pneumonia. Margaret S. Ferguson.—p. 131.
*Food Utensil Bacteriology. R. Irene Hutchinson.—p. 134.
Surgical Treatment of Chronic Frontal Sinusitis. V. E. Negus.—p. 135.
Simple Method of Estimating Penicillin and Other Bacteriostatics. J. Fielding.—p. 136.

Food Utensil Bacteriology.—The survey presented by Hutchinson shows that in communal feeding centers the cleaning of eating utensils is unsatisfactory. The finding of dysentery bacilli on the cutlery in one out of only twenty-five kitchens is rather disquieting and may suggest the origin of sporadic cases of "diarrhea." The finding of pathogenic streptococci fourteen times and of pathogenic staphylococci thirty-six times may help to explain the high incidence of septic mouth lesions so common in the last few years. The prevalent method of washing and drying infected crockery and cutlery appears to do little in the way of destroying their pathogens. Great interest was shown by the proprietors of the premises visited, and they were eager to know what measures could be adopted to remedy defects.

Lancet, London

1:89-124 (Jan. 18) 1947

Outlook for Physiology. C. L. Evans.—p. 89.
*Supraspinatus Syndrome. J. R. Armstrong.—p. 94.
Muscle Relaxing Action of Myanesin. F. M. Berger and W. Bradley. —p. 97.
*New Synthetic Curarizing Agent in Anesthesia. F. B. Mallinson.—p. 98.
*Treatment of Renal Failure in Weil's Disease by Spinal Anesthesia. M. H. C. Williams.—p. 100.
Bacteriophage Classification of Shigella Sonnei. E. Hammarström. —p. 102.
Paroxysmal Hypertension. A. S. Rogen.—p. 103.

Supraspinatus Syndrome.—Armstrong says that lesions of the supraspinatus tendon and subacromial bursa are the commonest cause of pain in the shoulder. This paper is based on 89 cases collected in three years. The mechanism by which the syndrome is produced is simple. In the middle range of abduction of the humerus the supraspinatus tendon, with its covering bursa, impinges against the overlying acromion. When a lesion of tendon or bursa exists, this pressure causes pain, and reflex muscle spasm accompanies any movement that tends to bring the lesion into contact with the acromion.

The cardinal signs of supraspinatus syndrome are (1) a painful arc (between 60 and 120 degrees) on abduction of the humerus, (2) reversal of the normal scapulohumeral rhythm and (3) tenderness on deep pressure over the supraspinatus tendon. Pain may lead to disuse, adhesions and limitation of movement. Two thirds of the patients recovered spontaneously. The remaining third were cured by acromionectomy.

Myanesin, a New Synthetic Curarizing Agent.—Myanesin is a synthetic substance having the formula alpha: beta-dihydroxy-gamma (2-methylphenoxy) propane. On the basis of the use of this new curarizing agent in 112 cases Mallinson stresses that it has a wider margin of safety than curare. Doses of 5 to 20 cc. (about 7 to 28 mg. per kilogram) do not produce undesirable effects. Abdominal relaxation is obtainable even in the conscious patient, and without any distress. The drug does not cause intercostal paralysis in doses producing full relaxation of the abdominal muscles. In most cases it is much more effective with barbiturate anesthesia than is curare and apparently enhances the action of the barbiturates. So easily is abdominal relaxation obtained under pentothal-nitrous oxide-oxygen when myanesin is used that the use of the more toxic agent cyclopropane is not necessary. It is effective under the lightest possible anesthesia. A true assessment of this or any other curarizing agent must await the results of tens of thousands of cases. Myanesin must still be considered an experimental drug.

Spinal Anesthesia for Renal Failure in Weil's Disease.—Williams reports the history of a man aged 61 who had had Weil's disease for eight days. He was drowsy, deeply jaundiced and dehydrated, with blood pressure 100/70 and blood urea 321 mg. per hundred cubic centimeters. Since recovery from such a state is rare, particularly at the age of 61, it was decided to adopt active measures to increase his urinary output and remedy his hypotension before irreparable renal damage had taken place. When his blood pressure had been raised to 130/90, high spinal anesthesia was induced up to the level of the seventh dorsal vertebra. The results were dramatic, and diuresis began, with a good urea content of the urine. After a day's lag the blood urea level fell at a remarkable speed. Recovery was complete.

1:125-164 (Jan. 25) 1947

Psychosomatic Approach to Orthopedic Surgery. A. D. Le Vay.—p. 125.
Residual Defects After Sprue: Review of 26 Cases. R. Drew, K. Dixon and E. Samuel.—p. 129.
*Use of Calciferol in Tuberculous Conditions. D. E. Macrae.—p. 135.
Ascites Following Infective Hepatitis: Case Treated with Concentrated Plasma. G. R. Fearnley.—p. 137.
Allergic Reactions During Desensitization to Sulfonamides. W. J. O'Donovan and I. Klorfajn.—p. 139.

Calciferol in Tuberculous Conditions.—Macrae says that the 20 cases of lupus vulgaris in which calciferol was given a trial were some of the worst in the country. The patients were divided into three groups, 7 patients being given intramuscular injections of an oily solution and receiving 600,000 units twice weekly, 7 an oily solution in capsules and 6 an emulsion, both latter groups having 150,000 units a day by mouth. During the first two or three weeks practically every one looked decidedly worse. Improvement began after three weeks in most cases, but in some of the worst not until after five or six weeks. Lupus vulgaris is best treated institutionally. The sedimentation rate should be measured at least once a month and treatment stopped if an unusual rise is found. Calciferol is of greatest value in the treatment of lupus vulgaris, but local treatment still has a place. Calciferol has given promising results in some forms of surgical tuberculosis. Toxicity is present in 50 per cent of the cases. Other disadvantages include the occasional dissemination of tuberculosis and flaring up of a quiescent site elsewhere. Constant supervision is necessary.

Medical Journal of Australia, Sydney

1:97-128 (Jan. 25) 1947. Partial Index

Air Evacuation of Casualties. F. W. Kiel.—p. 97.
Preliminary Report on Use of Radioactive Phosphorus in Australia. A. G. S. Cooper.—p. 104.

1:129-160 (Feb. 1) 1947

Coronary Clotting. E. R. Trethewie.—p. 129.
Pituitary Gland and Carbohydrate Metabolism: Part I. Posterior Lobe. A. B. Corkill and J. F. Nelson.—p. 130.
Nasal Obstruction in Children and Its Relation to Dental Development and General Health. R. H. Bettington.—p. 134.
Dentofacial Deformities Associated with Nasal Obstruction. A. T. Taylor.—p. 135.
Asthma and Other Psychophysical Interrelations. C. Swanton.—p. 138.

South African Medical Journal, Cape Town

21:37-72 (Jan. 25) 1947. Partial Index

Pollinosis in South Africa: Study of Seasonal Hay Fever. D. Ordman. —p. 38.
Responsibilities of Practitioner in Civil Aviation in South Africa. R. W. S. Cheetham.—p. 49.
*Central Nervous System Manifestations of Glandular Fever. T. Schneider and D. A. Michelson.—p. 57.

Manifestations of Central Nervous System in Glandular Fever.—Schneider and Michelson report the case of a youth aged 18 who, when admitted to the hospital, presented symptoms of severe meningitis and encephalitis. It was only as a result of the blood count that the possibility of glandular fever was

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thought of. The titer of the Paul-Bunnell test varied from day to day, dropping from the enormously high ratio of 1:28,000 to negative and then again becoming positive. The patient made a rapid recovery. Diagnosis of glandular fever should be kept in mind in all cases presenting symptoms of encephalitis or acute benign lymphocytic choriomeningitis. Cases presenting these symptoms should be kept under observation for a prolonged period after discharge for the detection of possible late sequels.

Tubercle, London

28:21-40 (Feb.) 1947

Relation Between Renal Tuberculosis and Primary Infection. H. J. Ustvedt.—p. 22.
Adhesion Formation After Pneumoperitoneum. F. L. Corrigan.—p. 25.
Prognosis of Primary Tuberculosis of Lung. Dorothy Stopford Price.—p. 27.
Case of Sarcoidosis of Lung with Regional Ileitis. A. Morland.—p. 32.

Presse Médicale, Paris

54:849-880 (Dec. 25) 1946. **Partial Index**

Cholecystic Polyposis. H. Mondor.—p. 849.
Advantages of Tomography in Pleural Calcifications. J. Olmer, F. Santamaria and M. Lallemand.—p. 852.
Diagnostic Importance of Elementary Myography in Pediatrics. R. Turpin, J. Lefebvre and J. Lerique.—p. 856.
*Angioneurotic Edemas of Stomach. P. Chevallier and F. Moutier.—p. 860.
Blood Circulation in Bone. A. Lamas, D. Amado and J. C. da Costa.—p. 862.

Angioneurotic Edema of Stomach.—Chevallier and Moutier assert that there is no other organ which becomes edematous as often and as easily as does the stomach. They present the histories of 11 patients. The first 5 patients had pure angioneurotic edema (Quincke's disease). The edematous masses were voluminous and the visceral edema may or may not coincide with tegumentary edema. One of the patients of this group developed angioneurotic edema of the face after the ingestion of strawberries and gastroscopy revealed diffuse edema. Another patient of this group developed urticaria in response to fish, chocolate and strawberries, and gastroscopy disclosed edema. The second group, comprising 2 patients, had toxic edema; 1 of them had chronic benzene intoxication and in the other the intoxication was the result of working with glue used in the making of shoes. In these toxic cases the edema was somewhat less voluminous. In the third group of 4 patients the edema was associated with various forms of anemia or with cachectic gastritis. In all except the patients with anemia the allergic character of the edemas was indicated by various cutaneous manifestations.

55:13-28 (Jan. 11) 1947

Penicillin and Gonococcal Infections (Based on 600 Observations Selected in Lille); First Appearances of Penicillin Resistance. C. Huriez and M. Desurmont.—p. 13.
Ascending Progressive Spinal Hemiplegia with Slow Course: Two New Cases. A. and M. Porot.—p. 14.
Technical Progress of Apparatus of Auditory Prosthesis. R. Caussé.—p. 15.
New Concept of Problems Associated with Monocytes. L. Fruhling and S. Roger.—p. 17.
Study on Renal Elimination of Bilirubin in Icterus. M. Enachesco, V. Comanesco and Mrs. M. Zamfirescu.—p. 17.
*Pneumonectomies and Lobectomies in Treatment of Pulmonary Tuberculosis. R. M. Garraud.—p. 18.

Pneumonectomy and Lobectomy in Pulmonary Tuberculosis.—Garraud considers pulmonary resection as having a definite place in the treatment of pulmonary tuberculosis. Pneumonectomy and lobectomy should be applied only to a limited number of patients in whom considerable destruction of the pulmonary parenchyma may be localized in one lobe or in one lung, when other methods of treatment have proved ineffective or may be contraindicated (cavity associated with bronchial stenosis, tight adhesions, tuberculoma). The remaining healthy pulmonary tissue must be sufficient to insure respiratory function after the surgical intervention. The mortality rate is still high, with an average of 15 to 20 per cent, but a better selection of cases and improvement in anesthesia and in technic may reduce it to 5.5 per cent. Only late results will tell whether pulmonary resection is preferable to thoracoplasty.

Acta Clinica Belgica, Brussels

1:377-488 (Sept.-Oct.) 1946. **Partial Index**

New Treatment of Narcolepsy-Cataplexy. J. Roskam.—p. 377.
Five and Seven Years of Follow-Up in Treatment of Adrenal Insufficiency of 2 Patients by Desoxycorticosterone Acetate. P. P. Lambert.—p. 383.
*Nonhypoglycemic Comas Produced by Insulin. J. P. Hoet and C. A. Vuylsteke.—p. 409.
Respective Roles of Thyroid and of Sympathicoadrenal System in Hyperthyroidism. M. De Visscher.—p. 419.
Action of Sympathicomimetic Amines on Glycemia in Man. J. Hughes.—p. 429.
Vitamin A Content of Blood in Hyperthyroidism in Man. A. Thomas and C. Leleux.—p. 436.
Hemorrhagic State in Patients with Pulmonary Tuberculosis. L. Swalue and C. Renard.—p. 442.

Nonhypoglycemic Comas Produced by Insulin.—Hoet and Vuylsteke report the histories of 4 patients in whom coma was produced by insulin, but the pathogenesis of this type of coma differs from that of true hypoglycemic coma. It may continue for hours and days and does not respond to dextrose injection. This nonhypoglycemic coma is similar to that which develops after a series of comas produced by insulin shock therapy. That type of coma likewise cannot be counteracted by the administration of dextrose. A poor nutritional state and particularly B_1 hypovitaminosis seem to be prominent among the factors causing this hypersensitivity of the nervous system.

Cardiologia, Basel

11:1-110 (No. 1 and 2) 1946. **Partial Index**

Experimental Investigations on So-Called Energeticodynamic Cardiac Insufficiency. H. Grauer and R. Hegglin.—p. 1.
*Three Fatalities in Electrocardiographic Exertion Test. P. H. Rossier and O. Spühler.—p. 60.
Pathogenesis, Etiology and Clinical Aspects of Disturbances in Orthostatic Regulation of Circulation. A. F. Essellier.—p. 70.

Fatalities Caused by Electrocardiographic Exertion Test.—Rossier and Spühler report the histories and the necropsies of 3 patients in whom exertion tests resulted in death. The electrocardiograms taken during rest had failed to reveal changes indicative of organic cardiac lesions, but all 3 patients had coronary disease. The authors warn against the routine indiscriminate use of the exercise tolerance test. The severity of exercise has to be individually adjusted, and caution is required in patients with coronary lesions.

Schweizerische medizinische Wochenschrift, Basel

76:1302-1324 (Dec. 21) 1946

Orientation on the Respirator. G. Fanconi.—p. 1301.
Oral Penicillin Therapy. R. D. Shaner.—p. 1302.
*Desoxycorticosterone Acetate in Adrenal Insufficiency. A. Kappert.—p. 1304.
Doctrine of Ranke and the Surgical Forms of Tuberculosis. A. P. Naef.—p. 1309.
Observations on Lumbar Disk Hernia. K. Lenggenhager.—p. 1314.

Desoxycorticosterone Acetate in Adrenal Insufficiency.—Kappert discusses the different forms in which desoxycorticosterone acetate can be administered, with particular attention to the implantation therapy. Signs of excessive sodium chloride and fluid retention are the most important secondary effects of treatment with desoxycorticosterone acetate. Slight edema of the face and the extremities, together with headaches, may be observed at the onset of the endocrine therapy but usually regress after the metabolism has been stabilized. If they increase progressively, the sodium chloride intake may have to be reduced.

77:109-132 (Jan. 18) 1947. **Partial Index**

Streptomycin. H. Bloch.—p. 109.
Studies on Experimental Alloxan Diabetes. M. Mamie and J. L. Rivier.—p. 112.
*Urethane in Treatment of Leukemia. S. Maringer.—p. 144.
*Bronchial Asthma and Mold Fungus Allergy. E. M. Fraenkel.—p. 115.
Flat Foot and Tibialis Anterior. M. R. Francillon.—p. 116.

Urethane Treatment of Leukemia.—Maringer reports favorably on the use of urethane (ethyl carbamate) in the treatment of a woman aged 69 who had chronic myeloid leukemia. The average daily dosage of urethane amounted to from 4 to 6 Gm. Over a period of ten weeks a total of 248 Gm. was given. A favorable effect was noticeable in the subjective symptoms, the hepatosplenomegaly and the white blood picture.

Bronchial Asthma and Mold Fungus Allergy.—Fraenkel reported that among 552 patients with bronchial asthma whom he studied in England there were 84 who gave positive skin tests with extracts of Aspergillus, Penicillium or Mucor fungi. Subsequently he found that mold fungi play a greater role as an allergic cause of bronchial asthma in England than on the European continent. This is due to the moist British climate and to the construction of the houses, and it is comparable with similar differences in various parts of the United States. The most frequent allergenic organisms were Sporotrichum types, Cladosporium, Penicillium, Aspergillus, Mucor and Monilia.

Arch. del Inst. de Cardiol. de Mexico

16:471-584 (Dec. 31) 1946. Partial Index

*Significance of Interstitial Lymphocytosis in Rheumatic Fever and Other Processes of Inflammation: Global Interpretation of Main Rheumatic Lesions. I. Costero.—p. 471.

Rheumatic Fever.—Rheumatic fever behaves in a different manner in young people and in adults. It has two well defined periods: the first period, which is prevalent in children and adolescents, with severe changes in the small vessels, a subacute course and death as the consequence of encephalic changes (rheumatic encephalopathy described by Gortari, Pellon and Costero); the second period, which belongs to adults and has lesions affecting mainly the endocardium, large vessels and the serous joint membranes. It has a chronic progressive course and tends to give recurrences. This period often starts after the first period and often leads to heart failure. Corresponding to these symptomatic types, rheumatic disease presents two different types of anatomic lesions: Aschoff nodules and lymphocytic infiltrations circumscribed to the organs involved, which are seen during the second period of the disease and are of unknown significance. Aschoff's nodules represent a hyperergic reaction. Lymphocytic infiltration is due to the local action of lymphocytogenic substances which originate in the atrophy and reabsorption of reticuloendothelial cells during a process of spurious inflammation. It shows permanent metabolic changes in the affected tissues. These metabolic changes are manifested not only by local lymphopoiesis but also by proliferative phenomena with histocyte differentiation.

Arch. Urug. de Med., Cir. y Especial., Montevideo

29:121-200 (Aug.) 1946. Partial Index

*Periarteritis Nodosa. F. Herrera Ramos, H. Malossetti, G. J. Fernandez and J. Medoc.—p. 123.
Purpuric Syndrome with Acute Anemia in Gastric Epithelioma with Bone Metastasis. A. Prato and O. F. Grosso.—p. 164.
Acute Infectious Thrombophlebitis of Cavernous Sinus Following Anthrax of Ala Nasi Cured by Penicillin. A. M. Loubejac and P. Zito.—p. 184.

Periarteritis Nodosa.—Herrera Ramos and his collaborators report what appears to be the first case of periarteritis nodosa in Uruguay. The diagnosis was made on the clinical symptoms and biopsy. The symptoms consisted of rapid emaciation, articular pain, neuritis of the four limbs, nephritis without hypertension, polymorphous and hemorrhagic skin eruptions, edema, fever, attacks of asthma, nodular x-ray shadows of the lungs, which later regressed to normal, anemia and eosinophilia.

Revista Cubana de Pediat., Havana

18:601-664 (Oct.) 1946. Partial Index

*Rare Congenital Heart Disease. L. de la Villa Rodriguez.—p. 608.
Diphtheria and Poliomyelitis. A. Curbelo, A. Clerch y Rius, E. Marrero Vela and C. Vega Aguilar.—p. 621.

Rare Congenital Heart Disease.—An infant presenting superficial respiration, gray cyanosis, bradycardia, dyspnea and low temperature died three days after birth. Necropsy showed only one ventricle, one ventricular orifice and only one artery leading from the ventricle. The ventricle was in communication with the right auricle through the auriculoventricular orifice (the only one in this case). The left auricle was represented by a rudiment showing atrophy. De la Villa Rodriguez believes that this rare abnormality is due to atrophy secondary to a complete embryonal development of the heart.

Revista de Gastroenterol. de Mexico

11:45-88 (March-April) 1946. Partial Index

*Diaphragmatic Hernia: Clinical Study. A. Luna Olivares.—p. 57.

Diaphragmatic Hernia.—The most frequent types of diaphragmatic hernia are the esophagogastric, hiatal and traumatic. Hiatal hernia is asymptomatic in its early stages and in the late phase presents symptoms similar to those of gastric ulcer or gastric cancer. Gastric hemorrhage is frequent. The diagnosis is made by x-ray study of the stomach. Medical treatment gives good results when the hernia is still reducible. Otherwise treatment consists in resection of the herniated sac, replacement of the herniated viscera and suture of the borders of the hiatal opening. The symptoms of traumatic hernia are similar to those of hiatal hernia, but they appear early and are more acute. The diagnosis is likewise made on x-ray study. Traumatic hernias require surgical therapy. Recurrences are rare if the proper technic is followed.

Revista Liga Puertorriq. c. e. Cancer, Santurce

6:79-94 (Aug.) 1946. Partial Index

*Early Diagnosis of Tonsillar Cancer. I. González-Martinez.—p. 89.

Early Diagnosis of Tonsillar Cancer.—The diagnosis of cancer of the tonsil is difficult, especially in intracryptic and palliative recess cancers. Early symptoms are unilateral local pain (of variable acuteness) of a tonsil either hypertrophic or with ulcerations, cervical adenopathy of the same side and difficult swallowing. Spitting of blood, deafness and earache are symptoms of advanced tonsillar cancer. Biopsy should be made only when one is prepared to start radium or x-ray therapy immediately after it is performed. It should be taken with the needle or the electrothermic loop. The amount of material taken should be small but still sufficient to include both neoplastic and normal adjacent tissues. Radiotherapy is the treatment of choice. It is immediately indicated if the clinical symptoms are strongly suggestive of tonsillar cancer even if the report of the biopsy is negative, in which event biopsy should be repeated in the course of the treatment. Surgical intervention is contraindicated.

Wiener klinische Wochenschrift, Vienna

58:725-740 (Dec. 6) 1946. Partial Index

*Biologic Procedure for Artificial Induction of Labor. F. Hoff.—p. 725.
Present Status of Experimental Research on Cancer. H. Hamperl.—p. 731.
Joint Disorders in Typhoid. O. A. Stracker.—p. 734.
Combination of Surprise Anesthesia and Local Anesthesia in Goiter Operations. A. Winkelbauer.—p. 737.

Biologic Procedure for Inducing Labor.—Preeclamptic and eclamptic women from whom food and fluid were withheld for therapeutic reasons often reacted to this fasting with the onset of labor pains. Hoff tried to induce labor by means of fasting in other women. He evaluates the efficacy of a forty-eight hour fast on the basis of 111 cases in which this method was tried for the induction of labor. In cases in which the fasting cure was instituted before the computed end of pregnancy the percentage of failure was high; when begun in the final week, success and failure were approximately even. In cases in which pregnancy had gone beyond term, the prospect of success was good. Multiparous women did not respond better to the fasting cure than did primiparas. It seemed that an effective fasting cure in primiparas also reduced the duration of delivery.

59:1-16 (Jan. 10) 1947. Partial Index

Austria as a Future Member of World Health Organization. M. Kaiser.—p. 2.
Bronchial Carcinoma. W. Denk.—p. 6.
*Two Cases of Paroxysmal Hypertension Cured by Removal of Pheochromocytoma. F. Mandl.—p. 11.

Two Cases of Paroxysmal Hypertension Cured by Removal of Pheochromocytoma.—Mandl presents the histories of 2 men aged 33 and 41 respectively in whom removal of pheochromocytomas of the adrenals counteracted attacks of hypertension. In the first patient diagnosis was made on the basis of x-ray tomography after an operation on one side had been unsuccessful. X-ray tomography gave a positive result also in

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the second case. In this case permanent hyperglycemia and hyperglycosuria also were cured. As regards the clinical picture, both of the reported cases were typical for medullary tumors of the adrenals. The picture is almost identical with that of intravenous intoxication with epinephrine. There is pallor of the face, the patient feels cold and there are headaches, palpitation, tachycardia, anginal pain of the heart, nausea and increased blood pressure. The author discusses deviations from this clinical picture and describes the treatment for prevention of pronounced fall in the blood pressure, which must be instituted during the operation. The hypertensive changes on internal organs rapidly regress after the removal of the tumor. The 2 cases reported here bring the total of all cases of this type in which operations were performed to 50.

Wiener medizinische Wochenschrift, Vienna

97:25-40 (Jan. 12) 1947. **Partial Index**

Evaluation of Electrocardiographic Records by Practitioner. O. von Zimmermann-Meinzingen.—p. 25.
*Use of Duodenal Tube in Diagnosis and Therapy of Intrahepatic Bile Passages and Other Hepatic Disorders. H. Crickeli.—p. 29.

Duodenal Tube in Infections of Bile Passages and Liver.—Crickeli stresses the great value of the use of the duodenal tube in the diagnosis as well as in the treatment of infections of the intrahepatic bile passages. Examination of the duodenal juice is frequently decisive for the diagnosis of cholangitis. Once this condition has been diagnosed, the author employs at first daily and later twice daily duodenal lavage with from 100 to 250 cc. of a 20 per cent solution of magnesium sulfate. Of 21 patients with infection of the intrahepatic bile ducts 18 were cured or at least greatly improved by the duodenal lavage, and time required for treatment was greatly reduced.

Acta Medica Orientalia, Jerusalem

5:387-420 (Dec.) 1946

*Mixed Thyroidism. H. Zondek.—p. 387.
Granuloma Venereum in Palestine. I. Katzenellenbogen.—p. 391.
Right Bundle Branch Block (Wilson) Following Measles. E. Lyon.—p. 400.
Tropical and Phagedenic Ulcer and Desert Sore: A Review. F. Sagher.—p. 405.

Mixed Thyroidism.—Zondek directs attention to the fact that there are patients who display a mixture of practically all possible symptoms of hyperthyroidism and hypothyroidism. No satisfactory explanation for the pathogenesis of such conditions exists. He assumes that the thyroid function is abnormal probably as the result of an abnormal lobe. Treatment should depend on the predominant symptom in the clinical picture, the basal metabolic rate. In cases in which it is below normal—the change over to subnormal values sometimes takes place over a period of some years—thyroidin should be generally given in doses not larger than 0.4 to 0.5 Gm. a week, even in the presence of hyperthyrotic signs such as tachycardia, and discontinued after normalization of the basic metabolic rate at least temporarily. If the basic metabolic rate is within normal limits or above normal, the usual treatment for hyperthyroidism should be applied.

Maandschrift voor Kindergeneeskunde, Leyden

16:297-328 (Oct.) 1946

*Gold Therapy of Chronic Arthritis in Children. T. Halbertsma.—p. 297.
Recovery of 2 Young Children with Pneumococcic Meningitis. A. V. Westrienen.—p. 308.
Vitamin D2 in Treatment of Lupus Vulgaris. M. K. Polano.—p. 315.

Gold Therapy in Chronic Arthritis of Children.—Halbertsma presents the histories of 6 children between 4 and 14 years of age who had chronic arthritis. He prefers the term chronic arthritis to Still's disease and to chronic primary infectious polyarthritis. Treatment consisted chiefly in intramuscular injections of a 2 per cent solution of solganal B in doses of 0.1 to 0.4 cc. given twice weekly. This corresponds to from 1 to 4 mg. of gold. After a series of ten injections one or more other series followed, each separated by a drug free interval. No accident due to intoxication was observed. All 6 children were cured. They came under treatment not long after the onset of the disease. Some had the septic type of disorder; others had few general symptoms, but in all cases the joint lesions were not serious.

Acta Orthopaedica Scandinavica, Copenhagen

16:101-212 (No. 2-4) 1946. **Partial Index**

Results After Resectio Arthroplastica Coxae and Arthrodesis Coxae Interna in Arthrosis Coxae. A. Berntsen and W. Anthonsen.—p. 110.
Congenital and Acquired Luxations of Capitulum Radii, with Discussion of Some Associated Problems. P. Windfeld.—p. 126.
Recurrent Dislocation of Shoulder. J. Agerholm-Christensen.—p. 142.
Tendon Transplantation for Repair of Opponens Paralysis of Thumb: Results from Operations After Methods of Ney and Silfverskiöld. P. H. Nielsen.—p. 148.
*Tuberculous Necrosis of Entire Vertebral Body with Negative X-Ray Findings. A. Hellstadius.—p. 163.
Habitual Luxation of First Carpometacarpal Joint. H. Wahren.—p. 172.
Resection of Lateral Plantar Nerve in Spasmodic Flat Foot and Metatarsalgia. H. Wahren.—p. 176.
Some Cases of Brodie's Abscess. S. Orell.—p. 180.

Negative Roentgenoscopy in Tuberculous Necrosis of Vertebral Body.—Hellstadius reports a case which demonstrates that a caseous tuberculosis may spread widely through the medullary spaces without conspicuous injury to the osseous tissue ensuing and consequently also without any apparent changes of the vertebral body as shown by x-rays. In addition, the case proves that adjacent intervertebral disks are not necessarily involved despite wide communication between the diseased tissue and the disk. This case emphasizes the difficulties of x-ray diagnosis of tuberculous spondylitis.

Nordisk Medicin, Gothenburg

31:1931-1944 (Aug. 30) 1946. **Partial Index**

Maternal Care in Norway. Grete Bonnevie Høyer.—p. 1931.

Hospitalstidende

*Variations in Incidence of Acute Hepatitis: Analysis of Epidemic Curve in Hepatitis According to Helge Petersen's Theories. M. Bjørneboe.—p. 1933.

Finska Läkaresällskapets Handlingar

Gonorrheal Arthritis in Infants. P. Fornell.—p. 1953.

Medicinsk Revue

Transvesical Prostatectomy. N. Aars Nicolaysen.—p. 1963.
*Bacteriologic Examination in Cases of Pneumococcus Pneumonia Treated with Sulfonamide. L. Selberg.—p. 1970.

Hygiea

Emphysematous Cystitis. R. Jönsson.—p. 1975.

Variations in Incidence of Acute Hepatitis.—In Denmark acute hepatitis occurs with seasonal variations. In 1931-1935 and 1941-1945 the variations were pronounced. Analysis of the epidemic curve according to Helge Petersen, Bjørneboe says, indicates that transmission of the infection from person to person probably does not play an important part in the form of the curve. The origin of the epidemic waves may depend on decreased resistance in the population or variations in the virulence of the infective agent. The infective agent must be assumed to be widely spread, possibly ubiquitous. Attention is called to similarities between hepatitis and poliomyelitis, both infectious diseases due to a virus, with possibility of fecal infection in both, the way of infection relatively seldom demonstrable and the maximum epidemic curve in the fall of the year, in poliomyelitis in September, in hepatitis a month or two later.

Bacteriologic Examination in Pneumococcic Pneumonia of Adults Treated with Sulfonamide.—Selberg says that of 356 cases of pneumococcic pneumonia in adults treated with sulfonamide 289 were lobar pneumonia and 67 bronchopneumonia. In the lobar form types 1, 2, 4, 5, 6, 7 and 8 were most frequent; in the bronchopneumonias the types established were evenly apportioned. There were 24 deaths. Excluding the 6 deaths within the first day of sulfonamide treatment, there were 18 deaths in 350 cases, or 5.1 per cent. Blood culture in 226 cases of lobar pneumonia showed bacteremia in 15.9 per cent, with a mortality rate of 17.6 per cent; in the nonbacteremic cases the mortality rate was 2.1 per cent. Bacteremia and deaths in cases with bacteremia occurred most often in patients over 65.

Complications occurred in 18.6 per cent of all the cases and in half of the cases with bacteremia. The author concludes that sulfonamides in many instances are ineffective in bilateral pneumonia and in bacteremia, especially in old persons. The sulfonamide treatment should in certain cases be supplemented with serum or penicillin.

31:1995-2058 (Sept. 6) 1946. Partial Index

Hospitalstidende

*Agglutination in Chronic Polyarthritis with Hemolytic Streptococci as Antigen. K. Kalbak.—p. 1997.
Postoperative Treatment of Thyrotoxicosis with Thyroxin. Anna Marie Gade.—p. 2000.

Svenska Läkaresällskapets Förhandlingar

Multiple Infections in Tuberculosis. A. Westergren.—p. 2013.
*Bacteriologic and Serologic Examinations of Pharyngeal Flora in Tuberculosis. T. Packalén.—p. 2014.
Bacteriologic Investigations in Necropsy in Tuberculous and Nontuberculous Cases. C. A. Adamson.—p. 2016.
Induction of Abortion. J. Olow and A. Brosset.—p. 2019.
Indications for Interruption of Pregnancy and Sterilization. E. A. Rosell.—p. 2020.
Medical Therapy and Prophylaxis of Alcoholism. S. Izikowitz.—p. 2038.

Agglutination in Chronic Polyarthritis with Hemolytic Streptococci as Antigen.—Kalbak found positive agglutination in 154 (79 per cent) of 183 cases of chronic polyarthritis. In 400 control subjects including normal persons and patients with other medical diseases there were few positive reactions; the reaction, however, was positive in 10 of 100 cases of rheumatic fever. No positive reactions occurred in the 18 serums with high antistreptolysin titer. The antistreptolysin reaction, the author says, expresses the toxin-producing ability of the streptococci, the agglutination reaction the extent of the streptococci in the organism. If the agglutination reaction is specific in chronic polyarthritis it may mean that the disease is a form of chronic sepsis with hemolytic streptococci. The value of the reaction in diagnosis is not clear. A negative reaction does not definitely exclude the disease; a positive reaction supports the diagnosis.

Bacteriologic and Serologic Examinations of Pharyngeal Flora in Tuberculosis.—Packalén concludes that the more abundant occurrence of streptolysin-forming B streptococci and yellow staphylococci in the pharynx in tuberculous patients is hardly to be considered a relatively unimportant manifestation parallel with or resulting from the tuberculous infection in the organism. These bacteria are rather to be regarded as having an important effect on the tuberculous process.

32:2491-2566 (Nov. 1) 1946. Partial Index

International Congress of Women Physicians in London. A. Andreen.—p. 2491.
Pantothenic Acid. V. Schmidt.—p. 2492.

Hospitalstidende

Eczema Due to Pieric Acid. D. Pedersen.—p. 2495.

Finska Läkaresällskapets Handlingar

*Influence of Tonsillectomy on Healthy Kidneys and on Course of Disorder in Nephritis.—H. Björk.—p. 2500.

Hygiea

Premature Separation of Placenta: Report on 102 Cases. L. Iacobaeus.—p. 2509.
Etiology of Kienbock's Diseases. Preliminary Report. F. Ståhl.—p. 2512.

Svenska Läkaresällskapets Förhandlingar

Experiences in Mass Inoculation Against Diphtheria in Sweden. H. Ericsson and Britta Ericsson.—p. 2528.
Antibiotic Agents Against Tubercle Bacilli. H. Davide.—p. 2534.
Substances with Bactericidal Effect on Tubercle Bacilli. H. Theorell and Sune Bergström.—p. 2544.

Influence of Tonsillectomy on Healthy Kidneys and on Nephritis.—The postoperative changes in the urine found in 8 out of 80 patients with healthy kidneys were unimportant, Björk says, except in 1 instance, when a mild but persistent nephritis set in. Tonsillectomy for therapeutic reasons was done on 18 patients with acute or subacute diffuse nephritis and on 2 with chronic nephritis. In 3 patients with acute nephritis and high sedimentation reaction a definitely favorable effect on the course of the disease has resulted. Postoperative reaction in the form of pronounced increase in erythrocyturia occurred in half the cases without unfavorable influence on the course as a whole; the occurrence or absence of the reaction affords no indication of the effect of the operation. The 18 patients resumed work; 15 were subjectively well. Physical examination showed recovery in 12, latent disease in 6. Tonsillectomy in acute nephritis is to be considered in extremely threatening cases regardless of the length of time since the onset, but in general it should be resorted to only when the nephritis does not show signs of improvement after some weeks of internal treatment and should then be carried out within three months after the onset. Tonsillectomy in grave chronic conditions is not advised. Internal treatment of the nephritis must be carefully continued after tonsillectomy.

32:2567-2614 (Nov. 8) 1946. Partial Index

Felty's Syndrome in Connection with Case After Splenectomy. G. Nyström.—p. 2567.

Hospitalstidende

Bilirubin Content of Blood After Operation. A. Zacho and E. H. Larsen.—p. 2571.
Sulfonamides and Synthesis of Vitamins in Intestine: Review. F. Schönheyder.—p. 2573.

Norsk Magasin for Lægevidenskapen

*Bradycardia. O. Jervell.—p. 2575.
*So-Called Adenomas or Mixed Tumors of Salivary Glands in Bronchi. P. Berdal.—p. 2593.
Spontaneous Remission of Leukemic Infiltration (?) in Cecum Simulating Cancer. W. L'Orange.—p. 2599.
Case of Malaria in Oslo. E. Vogt.—p. 2601.
Subacute Bacterial Endocarditis Treated with Penicillin: Two Cases. C. Lian.—p. 2603.

Hygiea

Cystic Lung in Children. B. Werner.—p. 2605.

Bradycardia.—Jervell states that the heart action was 50 or less per minute in 191 patients (139 men, 52 women) out of about 9,000 examined cardiographically from 1940 to 1945. Bradycardia due to disturbances in conduction appeared in only 18 patients (12 with disturbance in sinoauricular conduction, 6 with complete atrioventricular block). In the remaining 173 there was sinus bradycardia, usually due to increased tonicity of the vagus. The bradycardia in 105 patients with peptic ulcer and in 11 with other digestive disorders is regarded as a sign of vegetative constitution. Bradycardia with syncope may in predisposed persons depend on reflex action (sinus caroticus syndrome, vagovagal syncope). Three patients had hepatitis and 2 hypothyroidism; in 3 there was postinfectious bradycardia. The bradycardia often seen in older persons is partly of vagal origin, partly due to sclerotic changes in the heart with lowered irritability of the sinus node. Signs of degenerative heart disease were observed in 37 patients, 35 of them over 50 years of age.

So-Called Adenomas or Mixed Tumors of Salivary Glands in Bronchi.—Berdal reports 7 cases of these tumors observed at the Rikshospital during the last two years; in 5 the tumor was in a main bronchus, in 1 in a secondary bronchus, in 1 in the trachea. They are believed to have persisted for from two to twenty years; the symptoms set in between the ages of 20 and 30. In 2 instances the tumor recurred seven and two and a half years respectively after diathermocoagulation. As a rule these tumors are benign but progressive; now and then malignant development may occur. There is hemoptysis, usually repeated, in nearly all cases. An asthmatoid wheeze is often heard. The symptoms otherwise depend on the site and size of the tumor and possible pulmonary complications. Bronchoscopy is essential to allow inspection of the local conditions and to allow biopsy and planigraphy to determine intramural and extrabronchial spread. Radical surgery, roentgen-radium treatment and bronchoscopic treatment may be considered. The localization and extent of the tumor, complicating pulmonary changes and histologic type mainly determine the procedure. Six of the reported cases were treated with diathermocoagulation. Because of the risk of recurrence after conservative treatment, frequent bronchoscopy and eventually planigraphic examination is called for.

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Book Notices

Aging Successfully. By George Lawton. Cloth. Price, $2.75. Pp. 266. Columbia University Press, 2960 Broadway, New York 27, 1946.

Dr. Lawton is a consulting psychologist who has long been interested in the problem of older people and who deserves credit for developing a course on "Aging Successfully" in the Adult Extension Series of the Division of Social Philosophy, Cooper Union, New York. In writing this book he has drawn on his contacts with older people of various ages and in various walks of life. He discusses in plain, easily understood language the adjustments that one needs to make in preparation for the latter half of life. An idea of the problems dealt with can be had from a few sample topics: in youth prepare for age; jobs after 50; love at maturity; can youth and age be friends? a philosophy for maturity; a private talk with your older self; a bill of rights for old age.

The theme on which the book is based is put in one sentence in chapter XI: "A philosophy for maturity must be built on the older person's maximum utilization of every ability and inner resource which will make him a more effective human being." Dr. Lawton steers a sensible middle course between the over-optimistic view that life begins with middle age and the more cynical attitude expressed by the witticism current a few years ago that after 50 everything one likes to do is illegal, immoral or fattening. He emphasizes the lesson learned in the war that the older workers can hold their own with the younger, and that the policy of forcing men to retire while in their prime is senseless and unjustifiable.

Many medical men who read the book will object strongly to a footnote following the exquisite poem "Salutation of the Dawn:" "After the death of Dr. William Osler this poem . . . was found among the papers in his desk. Dr. Osler was a great physician who was convinced that men over 60 were useless and that the remedy was chloroform." It is regrettable that a slander perpetrated more than forty years ago by yellow journalism at its worst has been thus revived. Dr. Lawton might have done his readers a greater service had he reminded them that the poem serves as the prologue to Osler's masterpiece "A Way of Life." This little volume, written when he was 64, is one of the best prescriptions for aging successfully ever written.

Dr. Lawton's book can be recommended to all people over 50 who want to make the most of their later years, and to all people under 50 who are interested in preparing for old age or who have the responsibility of caring for elderly dependents. Its easy, conversational style makes it easy to read; its understanding attitude makes it palatable; its sound advice makes it helpful.

Conférences d'actualité sur les ultravirus. Par Mm. Lemierre, Boivin, Levaditi, Mollaret, Lépine et Gastinel. Paper. Pp. 120, with illustrations. Paris & Montpellier: Librairie Maloine, 27 rue de l'Ecole-de-Médecine, Paris 6e, 1944.

This is a collection of eight lectures presented in 1943 at a series of conferences arranged by the chairman of the department of bacteriology at the Faculty of Medicine in Paris. According to the introduction the conferences served to acquaint the physician and biologist with the recent interesting developments in the field of medical bacteriology. The subjects presented are infectious mononucleosis by A. Lemierre, the chemical constitution of viruses by A. Boivin, the electron microscope in microbiology by C. Levaditi, the maladie de Nicolas-Favre (lymphogranuloma venereum) by C. Levaditi, the human-equine-avian encephalomyelitis by P. Mollaret, ultravirus and cancer by P. Lépine, the immunity in the infections caused by ultravirus by P. Lépine and the biologic study of vaccinal allergy by P. Gastinel. These lectures have the character of a review. For quick orientation some possess definite value. The section on the encephalitides is the only one which carries bibliographic references in the text. It would doubtless require considerable revision to bring it up to date. Little critical evaluation of the factual knowledge is found in the lecture on immunity in virus infections. The importance of the theories on cellular immunity is supported by citing an experiment with a few guinea pigs (p. 101). The essential facts and the overemphasis of the histologic findings in the experimental lesions induced by the lymphogranuloma virus have been presented repeatedly by Levaditi in textbooks and other articles. Doubtless the most interesting lecture of the series in that of Gastinel on vaccinal allergy. However, the statement that the injection of a killed virus merely induces allergy, while a live attenuated agent stimulates both allergy and immunity, awaits further confirmation. Any one who reads French fluently will enjoy the lucid presentation offered in some of the lectures.

It's an Allergy. By Frank G. Crandall Jr., M.D., Director Allergy Clinic, University of California, Los Angeles Medical Department, Los Angeles Cloth. Price, $3.50. Pp. 318. Murray & Gee, Inc., Hollywood 28, California, 1946.

This is a comprehensive book on allergy written for the patient. It begins with a historical consideration which is brief and a discussion of the mechanism of allergy. There is a chapter on frequency of the disease followed by one on diagnosis, which includes extensive lists of common allergens among foods, pollens and miscellaneous substances, including cosmetics. The general treatment of allergy with drugs is discussed. Then follow special chapters on cosmetic allergy, hay fever and allergic rhinitis, asthma, skin allergies, digestive allergies, migraines, allergies of the nervous system, eye, ear, nose and throat, physical allergies and miscellaneous allergies. The final chapter is a well summarized piece of advice to allergic patients. There is an extensive bibliography, mostly of medical sources, which seems a trifle out of place in a book for lay persons, and a good index. This should be a useful book for patients who desire to know more about their disease. The author's discussion of treatment should not lead to self medication.

Palaeontology Invertebrate. By Henry Woods, M.A., F.R.S. Eighth edition. Cloth. Price, $3; 12s. 6d. Pp. 477, with 221 illustrations. Macmillan Company, 60 Fifth Ave., New York 11; Cambridge University Press, 200 Euston Rd., London, N. W. 1, 1946.

This well known account of the fossil invertebrates differs from the preceding edition only in minor changes and additions to the bibliography. Following an introductory chapter that explains the manner of formation of fossils, the varying degrees of preservation of animals as fossils, the chemical nature of the fossil remains and the scientific and economic importance of fossils, a chapter is devoted to each invertebrate group that has furnished fossils, namely the protozoans, sponges, coelenterates, echinoderms, annelids, brachiopods, bryozoans, mollusks and arthropods. In each chapter the time honored custom is followed of giving a conventional account of the anatomy of living members, with special emphasis on skeletal structures, succeeded by a survey of the fossil members. The account of living forms thus takes considerable space; it is questionable whether this is really necessary in a paleontologic work. The fossil members receive first a general description, followed by a list of important genera with their characters and distribution in geologic time. The illustrations, not too numerous, concern both living and fossil forms. Considering the size of the book there is adequate treatment of the most important invertebrate fossil groups, namely the rugose and tabulate corals, the echinoid, crinoid, cystid and blastoid echinoderms, the brachiopods, the bivalve, univalve and ammonoid mollusks and the trilobites. Altogether the book can be well recommended as giving a clear concise account in a handy form of the fossil invertebrates.

Human Genetics. By Reginald Ruggles Gates, B.Sc., Ph.D., D.Sc. In two volumes. Cloth. Price, $15. Pp. 742; 743-1518, with 326 illustrations. Macmillan Company, 60 Fifth Ave., New York 11, 1946.

This is the first comprehensive treatment in English of the literature of human heredity. It is more compendious than the multivolumed German works in this field, and at the same time it provides more encyclopedic coverage. The extent of the material which the author has undertaken to review may be inferred from the fact that although approximately 5,000 references are cited the author claims to have included little beyond the key references for each topic. These have been for the most part judiciously chosen, and they are admirably up to date. About three fourths of the text is devoted to pathologic conditions. It is obvious that the volume will prove an almost indispensable working tool for any one directly concerned

with genetic aspects of medical problems, and it will doubtless find readers among all who are interested in the total biology of disease. The author offers little critical evaluation of the material surveyed, and it must be confessed that his occasional attempts at interpretation or analysis often fail to be helpful. The introductory chapters, dealing with the general principles of human heredity, are rather unsatisfactory; they cannot compare, for example, with the treatment of similar subject matter in Roberts' Introduction to Medical Genetics. Sections touching on methodology are sometimes misleading and all together are quite inadequate to serve as a guide in the conduct of research or the interpretation of data. A commendable feature is the frequent inclusion of collateral material drawn from experimental animal genetics; the results of various of the developmental studies in particular are often suggestive of a more than superficial relevance to problems of human pathology. This work will find its chief use as a reference manual and bibliographic guide. Its value for these purposes is greatly enhanced by an excellent index of ninety pages.

Les ictères: Moyens d'exploration, simptômes, physio-pathologie, thérapeutiques. Par I. Pavel, maître de conférences à la Faculté de médecine de Bucarest. Second edition. Paper. Pp. 189, with 66 illustrations. Bucarest Rumania. 1944.

The first chapter is given to the theoretical formation of bilirubin and its secretion, which leads to a discussion of a chemical and radiologic examination with special reference to the duodenum. The usual discussion of functional icterus and its treatment together with a differential diagnosis from virus hepatitis is inadequately presented. Illustrations on pages 107 to 113 attempt explanation of the mechanism of jaundice based on histologic evidence. A consideration of the catarrhal jaundice comprises the remainder of the book, which suggests the trend and the worldwide interest in virus hepatitis. The etiology of the disease is discussed loosely as a mystery of the duodenum, the pancreas, the liver or possibly a systemic disease. Credit must be given to the careful recording of the clinical symptoms of infectious (catarrhal or virus) hepatitis leading to the full blown picture of jaundice. The relation of the liver, the duodenum, the gallbladder and the pancreas is debated inconclusively, with failure to suspect the nature of the etiologic factor. The long clinical experience of the toxic effects of protein in liver disease is discussed, but a significant exception for the tolerance and value of milk is mentioned (p. 175). The possible value of glucose and insulin is recorded, and special treatment of duodenal irritability with kaolin is reviewed. The value of this book is largely replaced by the series of articles which have appeared in the Scandinavian, British and American publications in the past three years. It is doubtful that the current drive on diseases of the liver will be aided by this volume, which was produced under the limitations of the times.

Lehrbuch der physiologischen Chemie in 29 Vorlesungen. Von Emil Abderhalden, Professor an der Universität Zürich. Twenty-third-Twenty-fifth edition. Cloth. Price, 26 Swiss francs. Pp. 417, with 51 illustrations. Benno Schwabe, Klosterberg 27, Basel 10, 1946.

Emulating his famous teacher at Basel (G. von Bunge) the author presents the subject of biochemistry in a series of twenty-nine excellently organized lectures. That this plan has been successful is evident from the frequent editions which have appeared. After an introductory approach the chemistry, digestion and metabolism of the fats are considered, followed by a discussion of their related phospholipids, sterols and steroid hormones and vitamins in eight lectures. The carbohydrates and proteins are similarly treated in eleven lectures, while the vitamins, hormones, enzyme systems and mineral, nitrogenous, gaseous and energy metabolism are taken up in the remaining ten lectures. The sequence and manner of presentation follow closely the structure of the numerous organic compounds discussed. In this the author's long association with E. Fischer is evident. Probably no other textbook covers the subject from this point of view so authoritatively and with equal logic and clarity. While the author no longer cites the literature in the text, he has added a brief section giving the names of the investigators who have made the fundamental discoveries discussed in the different lectures together with the topics of their research and the date. This method has permitted a direct presentation and saved considerable space but still gives an insight into the development of the subject without taking the space required by the customary historical approach. These changes were brought about largely by the fact that in the present edition the author was restricted to one small volume. He is to be commended on how well he has been able to present the subject in the small space allotted.

The Diabetic A B C: A Practical Book for Patients and Nurses. By R. D. Lawrence, M.A., M.D., F.R.C.P., Physician in Charge Diabetic Department, King's College Hospital, London. Ninth edition. Boards. Price, 4s. Pp. 79. H. K. Lewis & Co., Ltd., 136 Gower St., London, W. C. 1. 1946.

The primary purpose of this little manual, according to the author, is to confine itself to practical details, to show the diabetic patient how to live easily and comfortably, as well as healthily. Difficulties of understanding diabetes, doses of insulin, the three strengths prepared, methods of injection and signs of insulin overdose are gently ironed out so as to make them simpler for the patient to understand. Instructions and planning of diets are adequately and simply discussed under Diet-Line-Ration-Scheme, a method made popular in England but not in America. The numerous recipes for diabetic patients are also carefully planned and prepared. Since persons with diabetes are liable to the same illness as other people the section on what to do when ill will help to clarify many problems of care—diet and insulin—for diabetic patients during illness. The author is still in doubt concerning the merits of the third type of insulin, globin zinc insulin, when he states that "it is a delay action insulin, supposed to be intermediate in action between protamine zinc insulin and soluble insulin, . . . but its exact place in treatment is not yet fully established." Surely an insulin which has been in practical use over two years has established its merit. After all, globin insulin is merely an insulin with added globin and zinc, having a prolonged action of twelve to eighteen hours, whereas protamine zinc insulin lasts over twenty-four hours and plain insulin only four to six hours, facts established by clinical evidence. Generally speaking this book is an excellent accomplishment and may be recommended for the diabetic patient.

A Manual of Tomography. By M. Weinbren, B.Sc., M.R.C.S., L.R.C.P. Fabrikold. Price, 45s. Pp. 270, with 397 illustrations. H. K. Lewis & Co., Ltd., 136 Gower St., London, W. C. 1. 1946.

This is described as a summary of the author's seven years' experience with linear tomography. After a rather brief introduction the writer deals with tomography in the chest, spine, skull, larynx and miscellaneous anatomic regions. There is then a fairly long chapter on technic, a list of references and an index. As is customary with studies of a special nature, the author overextends himself in an attempt to demonstrate the usefulness of the method. For example, figures 3, 6 and 7 are reproductions of films alleged to show merely a "suggestion" of pulmonary cavity, while the respective succeeding illustrations are tomograms "revealing" clear demonstration of cavity. We believe that an experienced interpreter would not have needed body section films in these particular cases in order to diagnose cavity.

Figure 84 is an illustration of ankylosed sacroiliac joints and 84-a is a tomogram of the same case; we do not believe that it adds any particular information. The author's illustrations of tomograms of the thorax in the oblique position are quite instructive from the anatomic point of view but are of doubtful value from the clinical diagnostic aspect. He reproduces tomograms of the urinary tract and gallbladder, an extension of the method of very dubious value.

The pages on tomography of the temporomandibular joint and of the larynx are quite poor; this is surprising, since it is in these two areas that the method has the most usefulness.

With characteristic British candor the author states in the preface that he had no intention of publishing a book on tomography! He had prepared six hundred slides for a lecture on the subject to be given at Capetown, but "time did not permit more than half that number to be shown." The book is printed on good paper, and the quality of most of the illustrations is sound; the references are not complete, several of them lacking titles. There is a good index. We believe it is fair to label the work a labor of love but not a source of valuable information, even to tomographiles.

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Queries and Minor Notes

THE ANSWERS HERE PUBLISHED HAVE BEEN PREPARED BY COMPETENT AUTHORITIES. THEY DO NOT, HOWEVER, REPRESENT THE OPINIONS OF ANY OFFICIAL BODIES UNLESS SPECIFICALLY STATED IN THE REPLY. ANONYMOUS COMMUNICATIONS AND QUERIES ON POSTAL CARDS WILL NOT BE NOTICED. EVERY LETTER MUST CONTAIN THE WRITER'S NAME AND ADDRESS, BUT THESE WILL BE OMITTED ON REQUEST.

THE SMOKE NUISANCE

To the Editor:—I am a committee member of the Croton Rotary Club and I have been delegated to meet with the Croton Civic Association with regard to the smoke nuisance created by the Harmon railroad yards of the New York Central in our community. I would greatly appreciate a few comments from you with regard to what injuries are possible to the community from the smoke liberated by the railroad yards and the numerous coal-steam engines. I would be grateful for any comments which might help in our future meetings. Samuel Kahn, M.D., Brooklyn.

ANSWER.—The coal-burning steam locomotive constitutes one of the most serious single health menaces in the urban air pollution picture. This is particularly true for heavily industrialized cities located in regions prone to natural large scale fogs or to nocturnal fogs from a hill and valley topography such as one sees at Cincinnati and Pittsburgh. Coal-burning steam locomotives contribute (1) carbon particles, which would be harmless if pure but which have condensed on them varying loads of tars, some of which have been found definitely cancerigenic in animals; (2) fly-ash, which is probably more damaging than carbon soot to the human respiratory tract, especially in setting up chronic irritative states; (3) noxious gases, especially the oxides of sulfur, which form corrosive acids when dissolved in water, and (4) exhaust steam, which itself is not harmful but which is liberated into cold winter air in far greater amounts than the air can hold as invisible water vapor and hence must remain as a steam cloud. During stable winter weather phases of low air motion there is often formed a stratified ceiling 500 to 800 feet above the ground. Into this pocketed air mass the locomotives exhaust their steam and polluting materials. Natural fog tendencies are thus greatly accentuated, and the suspension and rapid accumulation of all flue products in this surface fog mass leads quickly to "smogs" and a dangerous atmosphere for the people to breathe. A recent U. S. Public Health Service survey (THE JOURNAL, Feb. 1, 1947, p. 334) indicated that about a fourth of the total pollution in the Chicago area is contributed by the coal-burning steam locomotives, but their output of exhaust steam to hold the polluting materials suspended easily gives them a first place as a public health menace. Their percentage contribution would be much higher if only the industrialized parts of the city were considered.

Death rates from pneumonia, tuberculosis and respiratory tract cancer provide a clear index of the damage air pollution inflicts on a city's population. All three of these diseases show a much higher death and incidence rate in badly polluted areas. This increase takes place mainly in the men who are out in the polluted atmosphere a greater portion of each day. The relation between sootfall and respiratory disease death rates is highly significant on a statistical basis and should lead public health and housing authorities to a keener appreciation of the importance of air pollution in the high respiratory disease death rates of slum populations. Interest in air pollution and the steam locomotive's contribution is becoming keen and countrywide. Diesel engines provide the best answer to this phase of the problem, for with them the emission of water and solid particles is reduced to a minimum.

TUBERCULOUS IRITIS

To the Editor:—A woman under my care is being treated for congenital syphilis with oxophenarsine hydrochloride and a bismuth compound. During the course of treatment an iritis of the left eye developed. She was seen in consultation by several ophthalmologists who, after a thorough investigation and examination, insist that it is nonspecific in origin. I am now investigating her for a possible tuberculous focus. Is it possible to have an iritis develop as a result of the antisyphilis treatment mentioned? M.D., New Mexico.

ANSWER.—No. It is not possible to have endogenous tuberculous iritis develop without the presence of a tuberculous infection somewhere else in the body.

Furthermore, it is not possible to induce any form of iritis by the use of any drug, unless it is applied directly to the eye.

ANTERIOR PITUITARY AND OVARIAN EXTRACTS NOT ABORTIFACIENTS

To the Editor:—A woman was seen in October 1945 who gave a history of amenorrhea for six to twelve months prior to this date. A diagnosis of pregnancy was not established. However, she was told that there was a possibility of pregnancy. It is now known that she was pregnant one month at this time. In December 1945 she was given Anterior Pituitary and Ovarian Extract (Sherman Laboratories, Detroit) containing 181½ grains of anterior pituitary fresh tissue and 40 grains ovarian fresh tissue. The Anterior Pituitary and Ovarian Extract was administered after a flat plate of the abdomen had failed to disclose that a fetus was present. The patient was given six ampoules on alternate days for what was thought to be a functional amenorrhea. Bleeding did not ensue. The medication was not given with the intention of producing an abortion. The patient was instructed fully that it had not been determined whether or not she was pregnant. The patient is now bringing suit, stating that the drug was given as an abortifacient. Is it possible that anterior pituitary and ovarian extracts will make a pregnant woman menstruate? M.D., West Virginia.

ANSWER.—There is no known drug or hormone which will produce abortions in normal cases, else the abortionists would have little to do. Even potent standardized pituitary preparations such as posterior pituitary injection cannot produce an abortion when the ovum is normal and normally implanted in the uterus. The anterior pituitary obtained from fresh tissue is most likely not as potent as posterior pituitary injection and hence it too cannot produce an abortion in a normal pregnancy. Likewise the ovarian substance which was administered to this patient could not have any effect in inducing an abortion.

ANTIBACTERIAL EFFECT OF SULFONAMIDES

To the Editor:—There seems to be disagreement as to the effect of sulfa drugs on various organisms. Lowsley and Kerwin state that sulfanilamide is not effective for Bacillus proteus, while sulfathiazole is effective against Streptococcus fecalis. Everett states that sulfonamide drugs are effective against all types of organisms commonly found in the urinary tract with the exception of alpha Streptococcus fecalis. Dodson states that sulfanilamide is more effective against streptococcus and B. proteus, while sulfathiazole is more effective against staphylococci. Dr. Harry Gold in Conference on Therapy in the *New York State Journal of Medicine* for May 1, 1944 says that practically all common varieties of organisms found in urinary tract infection responded to sulfonamides except B. proteus, nonhemolytic streptococcus and tubercle bacilli. Please clarify this, with particular attention to B. proteus and Streptococcus fecalis. C. K. Pearlman, M.D., Huntington, W. Va.

ANSWER.—It is obvious that experience in various clinics reflects differences of opinion concerning the antibacterial effect of the sulfonamides against the several species of bacteria causing infections of the urinary tract. It is generally regarded that Escherichia coli is sensitive to all the commonly used sulfonamides, but some strains of E. coli have been proved in vitro to be highly resistant to these drugs. In general, strains of B. proteus are highly resistant to sulfanilamide, sulfathiazole and sulfadiazine, and urinary tract infections due to this species do not respond favorably to treatment. This also applies to infections due to Streptococcus fecalis. Not uncommonly, strains of staphylococcus are highly resistant to the sulfonamides, as well as some strains of Streptococcus viridans.

HYDROCHLORIC ACID THERAPY

To the Editor:—Recently a paper entitled "Hydrochloric Acid and Mineral Therapy," by the late Walter B. Gay of St. Augustine, Fla., has come to my attention in which many extravagant claims are made. Can you inform me if it is safe to employ this treatment intravenously or intramuscularly and if it has any therapeutic value? M.D., Florida.

ANSWER.—Hydrochloric acid therapy has been tried intermittently for the past twenty years in a wide variety of conditions, mostly in infectious diseases. Twelve years ago a critical discussion of this work was published (THE JOURNAL, Feb. 17, 1934, p. 534), and nothing has transpired since then to alter the views expressed in the conclusion of that article: (*a*) Any alleged therapeutic effect is, in all likelihood, produced by alteration in blood colloids, such as hemolysis; (*b*) it has not been demonstrated beyond reasonable doubt that an appreciable leukocytosis is produced by such injections; (*c*) the reputed causative relationship of the alleged leukocytosis to clinical improvement is derived entirely from so-called post hoc reasoning and remains unproved; (*d*) adequately controlled evidence of clinical benefit from such treatment is completely lacking.

In the concentrations usually employed (1:3,000) hydrochloric acid has not been reported to cause harmful effects if not more than 10 cc. of such a solution is injected at one time. Of course, rigid asepsis must be observed, since the acid reaction produced locally favors bacterial growth.

CAROTID SINUS REFLEXES

To the Editor:—Last year, while I was descending the stairs after a call, a holdup man caught me from the side and pressed his arm around my neck. I became unconscious instantly. When I awoke I found myself on the landing of the floor below minus my money but perfectly sound in mind and body as if awakening from a deep sleep. Except for a few seconds of wonderment, my mind was perfectly clear. There was no pain, no tenderness nor marks of constriction round my neck. I know of similar cases without fatality or bodily injuries. Evidently the compression of the carotid vessels produced a partial anoxia of the brain—partial, because the circulation through the vertebral arteries was not obliterated. How long can pressure on the carotids with consequent partial anoxia of the brain and unconsciousness be maintained without danger? Could such a procedure be used for anesthesia? Such anesthesia would be rapid, simple and without any after-effect. A machine (like the Tycos) could be constructed with two longitudinal pads or compressing balloons to be applied to the sides of the neck back of the trachea. M.D., New York.

Answer.—Unconsciousness produced in the manner described in the query is almost always the result of reflexes from the carotid sinus and not of obliteration of the carotid arteries with resulting cerebral anemia. Mechanical stimulation of the carotid sinus sets up reflexes which after passing through various cerebral centers affect the pulse and blood pressure. The bradycardia and hypotension thus produced may cause temporary loss of consciousness. In addition, fainting may occur from the so-called cerebral reflex (Weiss, Soma; Capps, R. B.; Ferris, E. B., Jr., and Munro, Donald: Syncope and Convulsions Due to a Hyperactive Carotid Sinus Reflex, *Arch. Int. Med.* **58**:407 [Sept.] 1936).

Stimulation of the carotid sinus is not a satisfactory method of producing anesthesia because it is too transitory and because prolonged stimulation may be distinctly dangerous. It should be mentioned that this reflex is frequently taken advantage of in jiujitsu and other methods of so-called self defense.

AUTOLESIONISM

To the Editor:—A young woman for the past ten years has had an ulcerated area on the upper part of the left arm which has been recalcitrant to various forms of treatment and extremely painful to the slightest touch. Only aqueous or boric acid ointment is tolerated as medication. She has been seen by dermatologists and neurologists in skin clinics, in hospitals and at dermatologic meetings. A diagnosis of dermatitis factitia has been made more than once with the added statement that this diagnosis was offered in place of 'etiology unknown.' The patient has never asked compensation and denies injuring herself. Further she reiterates "How can I scratch my arm if the slightest touch makes me scream?" The following neuropsychiatric questions arise: Are autolesionists, as a rule, hyposensitive to pain to that they can stand severe mutilations without pain or with pleasure? How many autolesionists are hypersensitive to pain? Would hypersensitiveness to pain rule out autolesionism?

M.D., Rhode Island.

Answer.—Some people, because of a variety of psychologic reasons, mostly representing aggressive impulses repressed and turned against themselves, inflict lesions on their skin. Some autolesionists are hysterical personalities, some are psychotic. In the latter group the skin lesion inflicted may have special bizarre symbolic significance. A majority of autolesionists are hyposensitive to self-inflicted painful stimuli and some few may even derive pleasurable feelings from such acts. However, hypersensitiveness to pain does not rule out the possibility of autolesionism.

GANGRENE OF BOWEL AND MESENTERIC BLOOD SUPPLY

To the Editor:—What is the shortest length of mesentery that can be detached from a loop of ileum and produce gangrene of the bowel wall? What visible changes will appear in the bowel wall to indicate loss of blood supply sufficient to cause gangrene and how soon after detachment will these changes appear?

M.D., New York.

Answer.—In this problem experimental work on animals cannot be applied to man because of the difference in the anatomy of the mesenteric blood vessels. Even in man the variations are so great that resection of a similar extent of mesentery in 2 cases will not produce the same results. One of the main features to be taken into consideration is the site at which the mesentery is detached. If it is removed immediately at the wall, roughly 7.5 mm. can be safely detached without ensuing necrosis. Anything over this figure could produce impairment of nutrition of sufficient severity to cause localized gangrene. If the wound in the mesentery is some distance from the wall, collateral circulation is sufficient to maintain nutrition. A transverse tear of 3 inches occurring 1½ inches from the ileum has produced gangrene of 6 inches of bowel.

Whether impairment of the circulation will be enough to produce gangrene is a difficult problem. The extremes are easily dealt with. It is the intermediate cases that cause the trouble. Even wide experience and excellent judgment may on occasions prove faulty. After detachment of mesentery at the wall, color changes occur almost immediately. As the defect is produced farther away from the wall the changes take longer to occur, depending on the efficiency of the collateral circulation, so that fifteen minutes or longer may pass before signs of moderate ischemia occur. The visible changes are cyanosis, loss of normal sheen, lack of peristalsis and loss of pulsation of vessels. Color changes eventually become more evident, and the typical picture of necrosis is produced. If the patient is given pure oxygen by mask and if warm packs are applied, one may find that there is some return of circulation and a smaller extent of the bowel is compromised. The fluorescein and procaine tests have proved efficacious in some hands in determining the eventual viability of the bowel.

IRRADIATION OF ADENOIDS

To the Editor:—Please discuss the use of radon for the treatment of hypertrophied adenoid tissue. What are the indications, contraindications, method of application, dosage, and the earliest age at which this has been used? Is there any danger of irradiating other tissues than the adenoid, for example, the pituitary gland or other deeper tissue?

M.D., New York.

Answer.—Irradiation of nasopharyngeal lymphoid tissue is now common practice. This form of therapy apparently has its greatest usefulness for the treatment of small collections of lymphoid hyperplasia in and about the pharyngeal orifice of the eustachian tube which swell and produce edema within the tube and by this process produce secondary changes within the middle ear and hearing loss. In some instances this nasopharyngeal condition may account for congestive changes in the nose. Symptoms produced by the effect of hypertrophied adenoid tissue in small children have responded favorably to small amounts of irradiation. It has been used in children as young as 2 years of age.

Some of the first observations on the effect of irradiation of nasopharyngeal lymphoid tissue were made with applicators containing radon. This is not generally available, and it was found that radium filtered to provide the more caustic beta rays would give the same result. The beta rays are more caustic than the gamma rays but do not penetrate as deeply. With the use of the former, however, it was found that the clinical result was the same on lymphoid tissue in contact with the applicator as compared with the gamma rays (Boies, L. R.: Irradiation of Nasopharyngeal Lymphoid Tissue: An Evaluation, *Arch. Otolaryng.* **44**:129 [Aug.] 1946). The advantage of utilizing the beta rays lies in the fact that a small amount of radium is sufficient for a short period of irradiation.

Several companies now furnish applicators for this irradiation. The applicator is passed through the nostril until the radium is over the eustachian orifice of the side to be treated.

With this method of application and dosage there is no danger of irradiating tissue outside the nasopharynx, such as the pituitary gland. The effect of this irradiation on the lymphoid tissue is not a grossly destructive one. It has been referred to as a "biologic" effect by S. J. Crowe (*Ann. Otol., Rhin. & Laryng.* **53**:227 [June] 1944), who has described the effect of irradiation as follows:

"The action of the irradiation is to inhibit mitosis in germinal centers and thus stop the formation of new lymphocytes. Observation of hyperplastic lymphoid tissue under this treatment leads us to believe that lymphocytes, like the skin cells, have a brief life cycle, probably not more than two weeks. Under irradiation treatment no new lymphocytes are formed to replace those discarded and the mass gradually shrinks and disappears."

However, the effect on any considerable amount of lymphoid tissue is negligible, and surgical removal is indicated if there is any sizable mass of tissue.

RECURRING ERYSIPELAS-LIKE ERUPTIONS

To the Editor:—I am writing in regard to the discussion of the treatment of recurring erysipelas-like eruptions of the extremities (The Journal, March 1, 1947, p. 655). I have found that local treatment is ineffective. If the patient exhibits no intolerance to the drugs, 0.5 Gm. of sulfadiazine or sulfathiazole orally twice a day for a period of a minimum of six months will prevent recurrences. An occasional patient will require even more prolonged prophylactic treatment.

C. Russell Anderson, M.D., Beverly Hills, Calif.

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